Performance goals in conflictual social interactions: Towards the distinction between two modes of relational conflict regulation

Nicolas Sommet[1], Céline Darnon[2], Gabriel Mugny[3], Alain Quiamzade[3], Caroline Pulfrey[1], Benoît Dompnier[1] and Fabrizio Butera[1]*

[1]Université de Lausanne, Switzerland
[2]Université Blaise Pascal, Clermont Université & University Institute of France, Clermont-Ferrand, France
[3]Université de Genève, Switzerland

Socio-cognitive conflict has been defined as a situation of confrontation with a disagreeing other. Previous research suggests that individuals can regulate conflict in a relational way, namely by focusing on social comparison between relative levels of competences. Relational conflict regulation has been described as yielding particularly negative effects on social interactions and learning, but has been understudied. The present research addresses the question of the origin of relational conflict regulation by introducing a fundamental distinction between two types of regulation, one based on the affirmation of one's own point of view and the invalidation of the other's (i.e., 'competitive' regulation), the other corresponding to the protection of self-competence via compliance (i.e., 'protective' regulation). Three studies show that these modes of relational conflict regulation result from the endorsement of distinct performance goals, respectively, performance-approach goals (trying to outperform others) and performance-avoidance goals (avoiding performing more poorly than others). Theoretical implications for the literature on both conflict regulation and achievement goals are discussed.

When working on a problem, be it at school, at University, in organizations or in scientific research, people often find themselves in disagreement with others. Indeed, given the diversity in training, education, and points of view, it is highly likely that people working together come up with different solutions to the same problem or different explanations of the same phenomenon. In these situations, when do people try to 'win', to demonstrate that their point of view is better than the other's, and when do people rather comply with the other's point of view? The present article addresses this dilemma by studying the motivational determinants of the above two options, competition versus compliance.

*Correspondence should be addressed to Fabrizio Butera, Université de Lausanne-ISS-SSP, Vidy, Lausanne CH 1015, Switzerland (e-mail: fabrizio.butera@unil.ch).

Relational Conflict Regulation

The literature on conflict regulation (Buchs, Butera, Mugny, & Darnon, 2004; Doise & Mugny, 1984) has argued that being confronted with a coactor's diverging point of view elicits a 'socio-cognitive conflict', a conflict that is both social (i.e., a disagreement between two persons) and cognitive (i.e., doubts arise about the most adequate answer). Socio-cognitive conflict can be regulated in two ways: Focusing on the task and the answers ('epistemic conflict regulation'), or focusing on relative levels of competence and demonstrating one's own superiority (or at least avoiding showing one's own inferiority), namely 'relational conflict regulation' (Buchs *et al.*, 2004; Butera, Darnon, & Mugny, 2010; Mugny, Paolis, & Carugati, 1984; see also Jehn, 1995, for a similar distinction).

Authors in this area (cf. Butera & Mugny, 2001) maintain that relational regulation occurs in situations where social comparison is threatening for self-evaluation (Muller & Butera, 2007), as for example in the case of competitive situations (see Butera & Mugny, 1995; Johnson, Johnson, & Tjosvold, 2000; Quiamzade & Mugny, 2009; Quiamzade, Mugny, & Darnon, 2009). The question of competition and relational conflict regulation requires particular attention as most educational, organizational, and research settings are steeped in social comparison and competitiveness (Toma & Butera, 2009; Toma, Gilles, & Butera, 2011), with various systems of grading, streaming, ranking, and selection (see, Ames, 1992; Darnon, Dompnier, Delmas, Pulfrey, & Butera, 2009; Urdan, 2004). In such contexts, it is therefore particularly likely that conflict will be regulated in a relational way. When regulating conflict in a relational way, individuals try to 'defend' their competence. However, as our opening example showed, in so doing they have two possibilities: sticking to one's position (self-confirmation) or espousing that of the other (compliance). The present research aims at distinguishing these two forms of relational conflict regulation.

In stressful situations, individuals often aim to reduce the tension created by the situation rather than resolving problem. Thus, they develop coping strategies – unconsciously and/or consciously – so as to adjust themselves to the stressor (Cohen & Lazarus, 1979). When individuals perceive that they have enough ability to cope with the stressor, *challenge-appraisal* is likely to occur. They may then display active coping strategies, such as confrontation or argumentation. However, when individuals consider the situation as dangerous and perceive that they have limited abilities or resources to cope with the stressor, *threat-appraisal* is more likely to occur. They may then display passive coping strategies, such as stoic acceptance or avoidance (for a review, see Lazarus & Folkman, 1984).

In the specific case of a disagreeing partner, a situation that is potentially threatening for self-evaluation because it may question one's own competence, individuals can therefore react in two different ways. On the one hand, they can perceive the situation as a challenge, and focus on possible success and social reward (e.g., praise). Thus, they may try to uphold their own point of view and invalidate that of the other person, which can be termed *'competitive' relational regulation*. On the other hand, individuals can experience anxiety, anticipating failure in the situation of disagreement and negative evaluations. Thus, they may try to adopt the partner's answer in order to avoid losing in a situation of direct confrontation. This can be termed *'protective' relational regulation*.

In the conflict regulation literature, both these types of regulation are termed 'relational' conflict regulation (Doise & Mugny, 1984) or 'relationship' conflict (Jehn, 1995) because they rely on a focus on social comparison of competence. However, we argue that such a unity in conceptualization does not accurately account for existing data. Indeed, conflict regulation research has produced results that point to two distinct forms

of relational regulation. On the one hand, several studies have shown that in some cases of disagreement, children try to impose their own point of view on the partner, with little consideration of the partner's opinion, displaying a self-confirmation strategy (Mugny & Doise, 1978; Psaltis & Duveen, 2006). On the other hand, it has been also shown that in cases of disagreement, individuals sometimes imitate the opposing point of view without any further elaboration, displaying a compliance strategy (Mugny & Doise, 1978; Quiamzade, 2007; Schwarz, Neuman, & Biezuner, 2000). Likewise, in organizations, De Dreu (1997) found relationship conflict to be positively correlated with both contending responses, namely trying to impose one's perspective upon others, and avoiding responses, namely avoiding the conflict issue and ignoring the problem. The first aim of the present article is therefore to differentiate the two modes of relational conflict regulation, namely competitive regulation (confirmation of one's own point of view to the detriment of the other's) and protective regulation (complying with other's point of view to the detriment of one's own).

Achievement Goals and Conflict Regulation

If relational conflict regulation can appear in social interactions under two distinct modes, what are the factors that predict the appearance of one mode versus the other? Darnon, Muller, Schrager, Pannuzzo, and Butera (2006; Darnon & Butera, 2007) have already established that performance goals predicted relational regulation. However, basing our argument on the description of two modes of relational conflict regulation, namely competitive and protective, it seems reasonable to propose that they are not linked to the same goals. Thus, the second aim of the present article is to consider the distinction between the approach and avoidance forms of performance goals and how these different goals predict the two modes of relational conflict regulation.

   Studies on achievement goals, both in the educational (Ames, 1992; Dweck, 1986; Nicholls, 1984) and the organizational fields (Janssen & Yperen, 2004) have described a specific set of goals that focus on the demonstration of competence relative to others: performance goals. In more recent research, Elliot and his colleagues (Elliot, 1999; Elliot & Harackiewicz, 1996) have distinguished two forms of performance goals on the basis of Atkinson's theory of achievement motivation (1957). According to this theory, two trends exist in human behaviour related to achievement situations: The search for success and the avoidance of failure. Behaviours can, as a consequence, be oriented either towards *approach* (search for positive or desirable events) or towards *avoidance* (avoidance of challenges, escape, helplessness). Performance goals were thus divided between performance-approach and performance-avoidance goals. The former have been defined as the desire to be more competent than others (focused on attaining normative competence), whereas the latter correspond to the desire to avoid being less competent than others (focused on avoiding normative incompetence).

   Performance-approach goals have been found to predict dominant social outcomes, such as anti-social behaviours (Boardley & Kavussanu, 2010), legitimization of aggression (Dunn & Causgrove-Dunn, 1999) or authoritarian leadership style (Yamaguchi, 2001). Conversely, performance-avoidance goals have been found to predict submissive social outcomes, such as avoidance of help seeking (Tanaka, Murakami, Okuno, & Yamauchi, 2001) or behavioural inhibition (Elliot & Thrash, 2002). Thus, in interpersonal contexts (for a review, see Poortvliet & Darnon, 2010), performance-approach oriented individuals seem to display an active social pattern, centred on dominance and self-serving behaviours, whereas performance-avoidance oriented individual seem to display a

passive social pattern, centred on subordination and subdued behaviours (Conroy, Elliot, & Thrash, 2009).

Articulating the two lines of research, that on achievement goals and that on conflict regulation, the present research will test the general hypothesis that the two types of relational conflict regulation described above (competitive vs. protective) are predicted by, respectively, performance-approach versus performance-avoidance goals. Performance-approach goals are characterized by the desire to perform better than others. When faced with a conflict, it is probable that these goals predict a competitive conflict regulation, calling for the affirmation of one's own point of view and the invalidation of the other's. On the contrary, performance-avoidance goals lead individuals to focus on avoiding being less competent than the other person. In this situation, compliance, that is, protective regulation, may be sufficient to ensure the individual that he or she will not, in fact, be less competent than the partner (Quiamzade, 2007).

Hypothesis and Overview

The present set of studies aims to test the hypothesis that the two modes of relational conflict regulation correspond to different performance goal profiles. Performance-approach goals should predict competitive relational regulation, whereas performance-avoidance goals should predict protective relational regulation. Performance-approach and performance-avoidance goal endorsement were measured (Studies 1 and 2) and manipulated (Study 3). In Study 1, conflict regulation was measured using preference for models that illustrated either the participant's position (competitive regulation) or a partner's contradictory position (protective regulation). In Study 2, conflict regulation was measured using differential allocation of competence to oneself and the partner with whom one interacted: attribution of a superior relative self-competence score corresponded to competitive regulation, whereas attribution of an inferior relative self-competence score corresponded to protective regulation. Finally, in Study 3, conflict regulation was measured by asking participants to report to what extent they regulated conflict in a competitive (e.g., 'tried to show the partner was wrong') and a protective way (e.g., 'did you comply with his (her) proposition').

STUDY 1

Method

Participants and design

Thirty-six Swiss educational sciences students volunteered in Study 1, 28 women and eight men (mean age = 25.30; *SD* = 9.30). A situation of conflict (i.e., disagreement) was instigated in interactive dyads. Prior to this conflict, performance goals were assessed (approach and avoidance). Following the conflict, conflict regulation was measured by examining preferences for one's own answer (indicating competitive regulation) versus preferences for the partner's answer (indicating protective regulation).

Procedure

At the beginning of an introductory methods course in Social and Educational Psychology, participants were assigned to dyads. They were given a text that presented a phenomenon in learning. In each dyad, one participant read a text that described the primacy effect

($N = 17$) whereas the other one read a text that described the recency effect ($N = 19$). Both of them had to individually answer, with paper-and-pencil materials, a question on the direction of the effect, to commit them to one or the other direction (i.e., after having learnt a series of words, to what extent would you be able to recall the first/last ones?). Subsequently, they had to confront their answers to the ones of their partner and 'try to justify them in accordance with what [they] understood from the text'. After 5 min, respondents had to evaluate individually the probability of four graphs being correct. The graphs represented four possible relationships between 'the position of a word' and 'the probability of recall': (1) A decreasing curve (corresponding to the primacy effect); (2) An increasing curve (corresponding to the recency effect); (3) A U-shaped curve (corresponding to the serial position effect); and (4) An inverse U-shaped curve (corresponding to an incorrect alternative answer).

Measures

Initial ability

As the topic of the course was similar to that of our material (a text describing an experiment in Psychology), we used the average grade the participants obtained at the class semester as a measure of initial ability. This grade could range from 0 to 100 ($M = 76.58$, $SD = 9.67$).

Achievement goal questionnaire

Prior to the interaction, we assessed participants' performance-approach and performance-avoidance goals using items extracted from the French version of Elliot and McGregor's scale (2001), translated and validated by Darnon and Butera (2005). There were three performance-approach goal items (e.g., 'It is important for me to do better than other students'; $\alpha = .87$, $M = 3.27$, $SD = 1.41$) and three performance-avoidance goal items (e.g., 'I just want to avoid doing poorly in this experiment'; $\alpha = .73$, $M = 3.75$, $SD = 1.32$). The correlation between the two goals was $r = .40$, $p < .02$.[1]

Model rating

Participants had to evaluate (from 1, *not at all* to 7, *completely*) the four graphs described above, as being correct, defendable and convincing. One model illustrated the participant's answer (the 'confirmation model' [Cf], $\alpha = .91$, $M = 3.83$, $SD = 1.60$), another the partner's answer (the 'compliance model' [Cp], $\alpha = .92$, $M = 3.13$, $SD = 1.51$), another combined the participant's and partner's answers (the 'elaboration model' [El], $\alpha = .91$, $M = 4.78$, $SD = 1.68$), and a last model proposed an incorrect alternative (the 'error model' [Er], $\alpha = .92$, $M = 2.08$, $SD = 1.34$). From these scores, two new variables were again computed: the proportional rating for the confirmation model over the four ratings ($= Cf/(Cf + Cp + El + Er)$, $M = 0.27$, $SD = 0.11$), corresponding to competitive regulation (confirming one's own answer), and the proportional rating for the compliance model ($= Cp/(Cf + Cp + El + Er)$, $M = 0.22$, $SD = 0.09$) corresponding to protective regulation (agreeing with the partner).

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[1] *It is important to note that the performance-avoidance goals measure used in Studies 1 and 2 did not include an explicit normative referent. However, recent work by Elliot and Murayama (2008) demonstrated that the same pattern of results is obtained with the implicit and explicitly normative performance-avoidance items.*

Results

Including the text participants read (either primacy or recency), gender or age in preliminary analyses did not change the results; thus, these variables were not included in the final model. Moreover, preliminary analyses indicated that the covariate (initial ability) was not significantly linked to the independent variables, and thus none of the interactions were retained in the model (Yzerbyt, Muller, & Judd, 2004).[2]

Confirmation model

Regression analyses were conducted with the two goals and their interaction as predictors of preference for the confirmation model. The measure of initial ability was entered as a control variable. As expected, results revealed that performance-approach goals had a positive effect on the preference for the confirmation model, $\beta = .43$, $F(1, 31) = 5.32$, $p < .03$, $\eta^2 = .15$. No other effect reached significance.

Compliance model

Regression analyses were also conducted with the two goals, their interaction and initial ability, as predictors of preference for the compliance model. As expected, performance-avoidance goals had a positive effect on the preference for the compliance model, $\beta = .48$, $F(1, 31) = 4.19$, $p < .05$, $\eta^2 = .12$, whereas performance-approach goals had a negative effect, $\beta = -.53$, $F(1, 31) = 8.94$, $p < .01$, $\eta^2 = .22$. In addition, initial ability was found to positively predict the preference for the compliance model, $\beta = .36$, $F(1, 31) = 5.56$, $p < .03$, $\eta^2 = .15$. No other effect reached significance. A summary of the results is presented in Table 1.

Discussion

The present results indicate that performance-approach goals elicited preferential rating of the self-confirmatory model, which corresponds theoretically to competitive regulation (i.e., confirming one's own answer while invalidating that of the other). Conversely, performance-avoidance goals elicited preferential rating of the compliance model, which corresponds theoretically to protective regulation (i.e., complying with the partner's

Table 1. Study 1: Link between performance goals and measures of conflict regulation

	Proportional rating of confirmation model	Proportional rating of compliance model
Performance-approach goals	$\beta = .43$ $F = 5.32*$	$\beta = -.53$ $F = 8.94**$
Performance-avoidance goals	$\beta = -.07$ $F = .08$	$\beta = .48$ $F = 4.19*$

Note. $*p < .05$; $**p < .01$.

[2] *To test whether or not intraclass correlations ($ICC_{confirmation} = .42$, 95% CI = .01–.82; $ICC_{compliance} = .07$, n.s.) could have biased the results, we conducted multi-level analyses with dyads as level-2 and participants as level-1 units. The same model as that reported in the main analyses was used, with the only difference that goals were introduced as a level-2 variable. Results again showed that performance-approach goals predicted confirmation ($\gamma = .03$, SE = .01, p < .02) and performance-avoidance goals predicted compliance ($\gamma = .03$, SE = .03, p < .04).*

answer while invalidating one's own). Thus, the present study supports the idea that these modes of relational conflict regulation, competitive and protective, are predicted by specific performance goals.

It is worth noting that there was a negative association between performance-approach goals and preferences for the compliance model. Self-confirmation and compliance being theoretically orthogonal (i.e., one cannot simultaneously confirm his/her own answer while complying with that of the other), this is not a surprise. Bipp, Steinmayr, and Spinath (2008) similarly showed that performance-approach goals were negatively correlated with the Big Five personality facet 'compliance', defined as the tendency to submit to others during interpersonal conflicts (Costa & McCrae, 1992). One might also wonder why participants overall favoured compliance over confirmation models. In face-to-face interactions, norms of politeness become more salient and, politeness being negatively associated with dominant behaviour (Dillard, Wilson, Tusing, & Kinney, 1997), this phenomenon might be due to self-presentation concerns (as also suggested by Darnon *et al.*, 2009).

In Study 1, the conflict induced was a constant, which prevents from claiming that the observed dynamics are necessarily due to the attempt to regulate conflict. In Study 2, we therefore manipulated conflict. However, in this design, model ratings as a measure of conflict regulation are no longer appropriate. Indeed, in a no-conflict condition, where participants and their partner would read the same text, confirmation or compliance models lose their meaning. Thus, Study 2 introduces an alternative measure of conflict regulation through perceived competence. As relational regulation is concerned with social comparison, the most relevant measure to use is the way self-competence is defined *relative* to that of others; in other words, in Study 2 we measured the perceived difference between the participant's and the partner's competence (self-superiority). As argued earlier, competitive regulation corresponds to the enhancement of one's competence and the devaluation of other's, whereas protective regulation corresponds to the reversed pattern. The hypothesis is that performance-approach goals would be positively linked to the self-superiority score, whereas performance-avoidance goals would be negatively linked to that score, and that this would occur under conditions of conflict more than in a no-conflict condition.

STUDY 2

Method

Participants and design

Seventy-four Swiss Psychology students volunteered in the experiment, 67 women and seven men (mean age = 21.78; SD = 3.44). They either interacted with a disagreeing (i.e., conflict condition) or an agreeing (i.e., no-conflict condition) bogus partner. Following the interaction, performance goals (approach and avoidance) and perception of self- and other-competence at the task were assessed. Positive difference between the scores – in favour of self-competence – corresponded to competitive regulation. Negative difference – in favour of other-competence – corresponded to protective regulation.

Procedure

The procedure was similar to that used by Darnon, Harackiewicz, Butera, Mugny, and Quiamzade (2007). Participants were welcomed in groups of four in the lab. They were separated in different cubicles and were told they would interact with the other

participants via computers. The task consisted of reading four extracts of a Social Psychology text, and answering a question for each extract. For instance, one extract concerned information processing, and the related question was 'which one of the two types of information processing (deep vs. surface) favours a global representation of the person?' Questions were easy enough for all participants to give the correct answer (in our example, i.e., 'deep processing'). Participants had to enter their answer on the screen. They were always first to send it to their 'partner', and after a short time lapse, they received a bogus 'partner's answer'. Conflict was then manipulated (see Darnon, Butera, and Harackiewicz, 2007 or Darnon, Harackiewicz *et al.*, 2007, for the same procedure): The fictitious partner either disagreed three times out of four (conflict condition) or never disagreed (no-conflict condition). Disagreeing answers were wrong but plausible (as in Mugny & Doise, 1978). As far as the above example is concerned, in the disagreement condition the partner's pre-recorded answer was: 'I rather thought that the surface processing was the one which led to a global representation [...] whereas the deep processing took into account more information and, thus, favoured a detailed vision'; in the agreement condition it was: 'Yes, that's also what I would have answered'. After this interaction phase, participants were asked to estimate their competence and their partner's competence (see the next section).

Measures

Initial ability
Before the experiment, participants took a comprehension test in which they had to answer 10 questions about a short social Psychology text. This test provided us with a measure of initial ability. It could range from 0 to 10 ($M = 7.79$, $SD = 1.63$).

Achievement goal questionnaire and self-superiority score
The achievement goal questionnaire consisted of the same performance-approach ($\alpha = .88$, $M = 3.12$, $SD = 1.40$) and performance-avoidance ($\alpha = .77$, $M = 3.14$, $SD = 1.31$) goal items as in Study 1. Goals were correlated at $r = .38$, $p < .005$. As far as the self-superiority score is concerned, participants were first asked to answer whether or not they thought they 'understood the text well', 'managed to answer the questions well', 'were competent on this type of task', on a scale ranging from 1, *not at all*, to 7, *very much* ($\alpha = .90$). Participants then answered the same questions about their 'partner' ($\alpha = .91$). The self-superiority score was calculated by subtracting the mean competence attributed to the partner ($M = 4.86$, $SD = 1.08$) from the mean competence attributed to self ($M = 4.96$, $SD = 1.04$). A value of 0 on this score means that no difference was made between oneself and the partner. A positive value indicates that more competence was attributed to the self than to the partner, whereas a negative value indicates that more competence was attributed to the partner ($M = 0.10$, $SD = 1.34$).

Results

Overview of the regression analyses
The regression model included the two achievement goals, conflict (coded -1 for no conflict, $+1$ for conflict) as well as their interactions. Although the measure of achievement goals followed the manipulation of conflict, they were not affected by conflict and they

could be used as independent variables (both Fs < 1). As in Study 1, the measure of initial ability was entered as a covariate. Analyses controlling for age and gender led to the same results; these variables were therefore not included in further analyses. Preliminary analyses revealed a main effect of conflict on the covariate and thus, the interactions between the score of initial abilities and the two goals were included in the model. However, because the inclusion of these terms in the analysis did not change the significance of the results, these terms were not retained in the final model (Yzerbyt *et al.*, 2004). The final model contained eight predictors: performance-approach goals, performance-avoidance goals, conflict, the three 2-way interactions between these terms, the 3-way interaction, and initial ability.

Achievement goals as predictors of the self-superiority score

The self-superiority score was regressed on the model. The analysis revealed a strong main effect of conflict, $\beta = .51$, $F(1, 65) = 20.79$, $p < .001$, $\eta^2 = .26$. The self-superiority score was higher in the conflict condition ($M = 0.76$, $SD = 0.24$) than that in the no-conflict condition ($M = -0.55$, $SD = 0.13$). A main effect of performance-approach goals, $\beta = .27$, $F(1, 65) = 6.2$, $p < .02$, $\eta^2 = .09$, also indicated that the more participants endorsed performance-approach goals, the more self-superiority was accentuated. More importantly, the interaction between performance-approach goals and conflict, $\beta = .24$, $F(1, 65) = 5.01$, $p < .03$, $\eta^2 = .07$ indicated that performance-approach goals predicted self-superiority more positively when there was a conflict, $\beta = .50$, $F(1, 65) = 11.76$, $p < .002$, $\eta^2 = .15$, than when there was not, $\beta = .006$, $F < 1$, *n.s.* The interaction between performance-avoidance and conflict was marginally significant, $\beta = -.21$, $F(1, 65) = 3.77$, $p < .06$, $\eta^2 = .05$, but in the opposite direction. In the conflict condition, the higher the performance-avoidance goals, the lower the self-superiority score, $\beta = -.38$, $F(1, 65) = 5.9$, $p < .02$, $\eta^2 = .08$, which was not the case without conflict, $\beta = .01$, $F < 1$, *n.s.* The two interactions are presented in Figure 1.[3]

Discussion

In line with our hypothesis, the more participants in the conflict condition endorsed performance-approach goals, the more they perceived themselves as more competent than the partner. In addition, the more participants in the conflict condition endorsed performance-avoidance goals, the smaller this differentiation tended to be. When no conflict was induced, performance goals did not significantly predict the self-superiority score.

In the first two studies goals were measured as self-set goals. This prevents us from establishing a causal link between goals and conflict regulation. The aim of Study 3 was to address this issue in a face-to-face interaction by manipulating goals. In this study, conflict was measured. Hence, Study 3 tests the hypotheses that conflict should (i) positively predict competitive regulation in the performance-approach goal condition more than in

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[3] *A regression analysis was also conducted on mean competence attributed to self with performance-approach goals, performance-avoidance goals, conflict, all the interactions, and initial ability. Neither the interaction between conflict and performance-approach goals, $\beta = .11$, $F < 1$, n.s., nor the interaction between conflict and performance-avoidance goals, $\beta = -.06$, $F < 1$, n.s., was significant. The same analysis was conducted on mean competence attributed to the partner. Results revealed interactions between conflict and performance-approach goals, $\beta = -.20$, $F(1, 65) = 4.13$, $p < .05$, $\eta^2 = .05$, and between conflict and performance-avoidance goals, $\beta = .19$, $F(1, 65) = 3.76$, $p < .06$, $\eta^2 = .05$. These results suggest that the differences observed on the self-superiority score are due to the devaluation of other-competence rather than the enhancement of self-competence, as in Toma, Vasiljevic, Oberlé, and Butera (2012).*
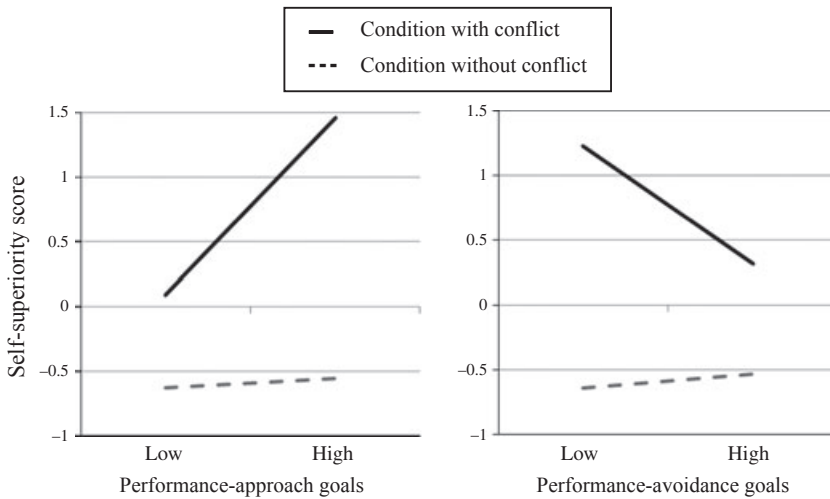
Figure 1. Self superiority as a function of performance-approach goals and conflict (on the left) and performance-avoidance goals and conflict (on the right), Study 2.

the performance-avoidance condition; (ii) predict protective regulation in the performance-avoidance goal condition more than in the performance-approach condition.

STUDY 3

Method

Participants

Forty-six French Psychology students volunteered for the experiment. One participant had uncommon studentized deleted residual on relevant measures and was dropped from the analyses (Judd & McClelland, 1989). Another one was removed because of missing data. The final sample consisted of 41 women and three men (mean age = 19.40; $SD = 1.54$). Two students were invited to the lab at the same time. Each dyad was randomly assigned to one of the two goal conditions ($N = 23$ in the performance-avoidance goal condition; $N = 21$ in the performance-approach goal condition).

Procedure

The procedure was similar to that used by Darnon and Butera (2007). Two participants who did not know each other were instructed to study cooperatively two texts that dealt with Social Psychology theories. Then, depending on the condition, participants were given either performance-approach or performance-avoidance goal instructions. These instructions were the same as in Darnon, Harackiewicz *et al.*, (2007), who also report evidence for their effectiveness in inducing the different goals. In the performance-approach condition, participants were told that they should try to perform better than the majority of students. In the performance-avoidance condition, they were told that they should try to avoid performing less well than the majority of students. The participants of a same dyad always received the same instructions.

After the goal induction, participants were given the texts. They had to read the first part of the text and then to read a question. For one participant, this first part depicted the false-uniqueness effect whereas, for the other one, it depicted the false-consensus effect. The

question concerned whether individuals tend to underestimate versus overestimate one's similarity as compared to others. Subsequently, one of the participants would give his/her answer first (i.e., underestimation), followed by the other (i.e., overestimation). The order of answering was counterbalanced. Dyads had 3 min to exchange their opinion and justify their position. During this time, they could check their own text again if they needed to, but they could not directly show it to their partner. Then the experimenter asked them to read the second part of the text and the same procedure was repeated. This reading-discussing procedure was carried out for each of the four parts of the texts. After the last question, participants were given a questionnaire containing the dependent variables.

Materials

In the present experiment, disagreement – the operational proxy of conflict – was measured, and therefore we wanted to give participants materials that would be likely to induce disagreement. These materials consisted of two texts, text A for one participant and text B for the other, presenting seemingly contradictory effects. One participant was given text A, and the other was given text B. Thus, it was likely that their discussion would generate some disagreement. Each text contained four parts and each part presented an experimental effect. As mentioned above, the first part presented the false-uniqueness effect for text A, the false-consensus effect for text B. The second part was about a manipulation technique, but in this case, text A and text B were identical. The third part was about persuasion, with text A presenting the primacy effect, text B the recency effect. The fourth part was about social judgment, with assimilation effect for text A, and contrast effect for text B. All the chosen effects seem contradictory, but are not incompatible, as research has found an organizing principle for each of them.

Measures

Initial ability

To control for initial ability, we collected the grade the participants had obtained on the previous semester for their Social Psychology exam. This grade could range from 0 to 20 ($M = 12.56$, $SD = 2.93$).

Amount of perceived disagreement

Participants had to report (on a scale ranging from 1, *very few* to 7, *very many*), the number of elements that they felt had provoked disagreement between themselves and

Table 2. Study 3: Conflict regulation items and their factor loading using principal component extraction with oblique rotation

When disagreements occurred, to what extent did you…	Factor 1	Factor 2
try to show you were right?	.87	.13
try to show your partner was wrong?	.90	.13
try to resist by maintaining your initial position?	.81	−.26
think your partner was certainly more correct than you?	.20	.66
comply with his(her) proposition?	.01	.76
agree with his(her) own way of viewing things?	−.14	.87
% of explained variance	37.7%	31.1%

their partner during the exchange. This measure was used as the second, continuous, independent variable ($M = 3.32$, $SD = 1.39$). The amount of disagreement did not differ across conditions, $F < 1$.

Mode of conflict regulation
After the interaction, participants were asked to indicate (on a scale ranging from 1, *not at all*, to 7, *completely*) to what extent, when disagreement occurred, they regulated it in a competitive way (three items, e.g., 'tried to show the partner was wrong', $\alpha = .82$, $M = 3.8$, $SD = 1.52$). Three further items asked them to indicate to what extent they regulated conflict in a protective way (e.g., 'did you comply with his (her) proposition', $\alpha = .66$, $M = 3.72$, $SD = 1.17$, for protective regulation). The six items are presented in Table 2.

Pilot study
In Study 3, we use self-reported measures to assess conflict regulation, whereas in Studies 1 and 2 we, respectively, used preferential rating of models and self-superiority score. One might wonder whether these measures are related to the same conceptual construct. To check this assumption, we conducted a Pilot Study. A total of 240 Swiss undergraduates, 149 women and 91 men (mean age = 21.20; $SD = 2.95$) volunteered in a pilot study aiming to test the convergence of our outcome variables. The study was conducted on the Internet. The procedure was the same as that used in Study 1. Participants were given a text that presented either the primacy ($N = 119$) or the recency effect ($N = 121$) and received a disagreeing answer from a bogus partner. After the 'interaction', participants had to evaluate the same models as those used in Study 1. From these scores, proportional rating for the 'confirmation model' ($M = 0.28$; $SD = 0.14$) and the 'compliance model' ($M = 0.23$; $SD = 0.10$) were computed. Secondly, similarly to Study 2, the participants had to attribute competence points (from 0 to 100) to themselves and to the other person. A self-superiority score was created by subtracting the latter from the former ($M = 3.65$; $SD = 23.83$). Thirdly, participants were asked to fill in the same conflict regulation items as those used in Study 3 ($\alpha = .74$, $M = 3.63$, $SD = 1.44$ for competitive regulation, $\alpha = .61$; $M = 3.71$, $SD = 1.24$ for protective regulation). Table 3 shows the correlations between the two modes of self-reported regulation, the self-superiority score and the rating of each predictive model.

Table 3. Pilot study: Correlations between self-reported and behavioural measures of conflict regulation

	1	2	3	4
1. Competitive regulation	—			
2. Protective regulation	−.38***	—		
3. Self-superiority score	.50***	−.50***	—	
4. Confirmation model	.21**	−.13*	.15*	—
5. Compliance model	−.36***	.35***	−.30***	−.38***

Note. *$p < .05$; **$p < .01$; ***$p < .001$.

Results indicated that preference for the confirmation model was positively correlated with the self-superiority score and with self-reported competitive regulation. Conversely, preference for the compliance model was negatively correlated with self-superiority score and positively correlated with self-reported protective regulation. Finally, the higher the self-superiority score, the higher the self-reported competitive regulation, and the lower the self-reported protective regulation. This confirms the overlap among the various dependent measures that have been used across the studies reported here.

Results

Factorial structure of the scales
As can be seen in Table 2, factor analysis revealed a two-factor structure, with Factor 1 accounting for 37.7% of the variance and comprising the three competitive relational regulation items and Factor 2, accounting for 31.08% of the variance and consisting of the three protective relational regulation items.

Overview of the regression analyses
The goals variable was coded -1 for performance-avoidance goals and $+1$ for performance-approach goals. Moreover, the amount of perceived disagreement was entered in the regression analyses as well as the interaction between goals and disagreement. The grade obtained in Social Psychology in the previous semester was also entered in the regression analysis as a covariate. Controlling for age and gender led to the same results and these variables were not included in further analyses. Moreover, preliminary analyses indicated that the covariate (initial ability) was not significantly linked to the independent variables and thus none of the interactions were retained in the model. The final regression model contained four terms: goal type (performance-approach, performance-avoidance goals), amount of perceived disagreement, the interaction between goal type and amount of disagreement, and initial ability.[4]

Mode of conflict regulation

Competitive regulation
A main effect of disagreement, $\beta = .33$, $F(1, 39) = 5.25$, $p < .03$, $\eta^2 = .12$, indicated that the higher the amount of disagreement, the more participants reported regulating it in a competitive manner. The main effect of goals was not significant, $\beta = .15$, $F(1, 39) = 1.03$, $p < .32$, $\eta^2 = .03$. More importantly, the predicted interaction between conflict and goals was significant, $\beta = .32$, $F(1, 39) = 5.13$, $p < .03$, $\eta^2 = .12$. As can be seen in Figure 2, in the performance-approach goal condition, the higher the conflict, the higher the competitive regulation, $\beta = .65$, $F(1, 39) = 9.85$, $p < .005$, $\eta^2 = .13$, whereas, in the performance-avoidance condition, such a relationship was not observed $\beta = .01$, $F < 1$, *n.s.*

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[4] *To test whether or not intraclass correlations ($ICC_{competitive} = .46$, 95% CI = .12–.80; $ICC_{protective} = .24$, n.s.) could have biased the results, we conducted multi-level analyses with dyads as level-2 and participants as level-1 units. The same model as that reported in the main analyses was used, with the only difference that goals were introduced as a level-2 variable. Results showed that the predicted interaction between goals and disagreement remained significant for competitive regulation ($\gamma = .31$, SE = .15, p < .04) as well as protective regulation ($\gamma = -.27$, SE = .12, p < .03).*
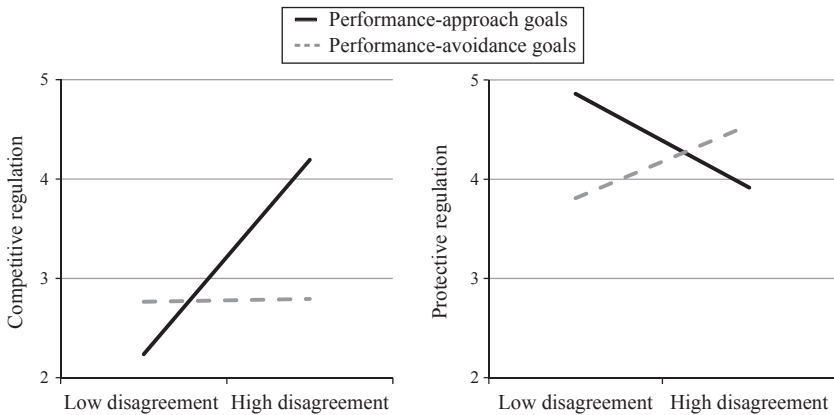
Figure 2. Competitive and protective regulation as a function of amount of perceived disagreement and type of performance goal condition (Study 3).

Protective regulation
Neither the main effect of goals, nor the main effect of disagreement reached significance, both $Fs < 1$. The predicted interaction between conflict and goals was significant, $\beta = -.33$, $F(1, 39) = 4.96$, $p < .04$, $\eta^2 = .11$. As can be seen in Figure 2 in the performance-avoidance condition, the higher the conflict, the higher protective regulation, $\beta = .32$, $F(1, 39) = 2.52$, $p = .13$, $\eta^2 = .06$, whereas in the performance-approach condition, the reversed pattern was observed, $\beta = -.34$, $F(1, 39) = 2.34$, $p = .12$, $\eta^2 = .06$. Although these simple slopes significantly differed from each other, neither differed significantly from zero.

Discussion

Consistent with Study 2, but in a more ecological context and with manipulated goals, an interaction between goals and conflict was observed for both measures of conflict regulation. Conflict positively predicted competitive relational regulation more in the performance-approach condition than that in the performance-avoidance condition. Conversely, conflict positively predicted protective regulation more in the performance-avoidance condition than that in the performance-approach condition. It is worth noting, as far as protective conflict regulation is concerned, that although the predicted goal by conflict interaction was significant, the simple slopes were not. However, due to sizes of these effects (i.e., medium), the non-significant slopes are probably due to lack of statistical power (Cohen, 1988). The fact that the link between performance-avoidance goals and protective regulation has been observed three times (i.e., in Studies 1, 2 and 3) also speaks of its robustness and consistency (Cohen, 1994).

GENERAL DISCUSSION

Research on socio-cognitive conflict has long been interested in the fact that when people are studying, working, and making decisions together, conflict regulation could be 'relational', namely focused on threatening social comparison of competence. In the present article, a further distinction is made between competitive relational regulation

(a regulation based upon the assertion of one's own competence) and protective relational regulation (a regulation based upon compliance). This article provides evidence that these two modes of relational conflict regulation correspond to different performance goal profiles.

In line with our hypotheses, results of Study 1 indicated that performance-approach goals predicted competitive regulation (as evidenced by preferences for self-confirmation), and performance-avoidance goals predicted protective regulation (as evidenced by preferences for other-confirmation).[5] The same pattern was observed in Study 2 on differential allocation of competence to self versus other and in Study 3 on ad hoc self-reported measures of competitive versus protective conflict regulation. It is also worth noting that these dynamics were replicated from face-to-face (Studies 1 and 3) to computer-mediated (Study 2) interactions. Moreover, in Study 2, the manipulation of conflict showed that the above dynamics are typical of conflict situations and do not appear when people are in agreement, thereby supporting an interpretation in terms of conflict regulation. Such an interpretation was also supported by Study 3, in which interactions between goals and measured conflict (amount of disagreement) were again observed. Moreover, in Study 3, goals were manipulated, supporting the idea that different performance goals have causal effect on conflict regulation.

The present study contributes to the conflict regulation literature. Although sometimes evoked for theoretical reasons, the existence of two distinct relational regulations – protective and competitive – had not been directly assessed in prior research. Factor analyses in Study 3 showed that the two modes of self-reported relational conflict regulation clearly correspond to two distinct factors, competitive relational regulation and protective relational regulation. Moreover, the pilot study reported in Study 3 shows that self-reported competitive regulation is correlated with a preference for a self-confirmatory model, whereas self-reported protective regulation is correlated with a preference for the other-confirmatory model. The present research has substantiated these theoretical distinctions in two scales that can be used by researchers interested in the topic of conflict regulation. This theoretical contribution may very well have also an applied implication for conflict management. For instance, some authors have pointed out the negative effects of conflict in the workplace (e.g., De Dreu, 2008), and distinguishing competitive and protective forms of conflict regulation may help predicting different forms of potentially detrimental outcomes.

More importantly, taking into account the distinction between performance-approach and performance-avoidance goals has made it possible to pinpoint different motives that may correspond to each mode of relational conflict regulation. Socio-cognitive conflict raises uncertainty about self-competence (Butera & Mugny, 2001). As the idea of being less competent can reduce one's perception of self-worth and value (Tesser, 1988), conflict may represent a competence threat (Quiamzade & Mugny, 2009). As pointed out in the introduction, in such stressful contexts, people can react in two different ways, depending on the type of cognitive appraisal of the situation: *challenge-appraisal* and *threat-appraisal* (Lazarus & Folkman, 1984). The present article demonstrates that,

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[5] *Another correlational study, not reported in full here, replicates the findings of Study 1. Forty participants answered four questions on extracts of a Social Psychology text. Each answer was sent to a bogus 'partner' via computer (cf. procedure of Study 2). Participants reported performance goals (as in Study 1) and their mode of conflict regulation (as in Study 3). Regression analyses indicated that the higher performance-approach goals, the higher the competitive regulation, $\beta = .49$, $F_{(1, 35)} = 9.90$, $p < .004$, $\eta^2 = .22$. Moreover, the higher the performance-avoidance goals, the higher the protective regulation, $\beta = .33$, $F_{(1, 35)} = 4.21$, $p < .05$, $\eta^2 = .11$. For additional information, please contact the authors.*

depending on individuals' goals, relational conflicts lead to two different strategies of defensiveness: performance-approach orientation predicts competitive regulation whereas performance-avoidance predicts protective regulation. This contribution is important because in previous research in education (Doise, Mugny, & Perret-Clermont, 1975) and organizations (Pinkley, 1990), the regulation of relational conflict via competition versus compliance has merely been described as an emergent feature of the conflictual interaction. Thus, the present research provides two motivational factors, respectively, performance-approach and performance-avoidance goals, that allow making a priori hypotheses about the form that relational conflict regulation will take.

This may have a second implication for conflict management. As our research defines the antecedents of competitive and protective conflict regulation, it could help teachers or team leaders to prevent or diminish their emergence. Competitive contexts (e.g., ranking evaluation practice, extrinsic reward focused on results rather than effort) are known to favour the endorsement of performance goals (Meece, Anderman, & Anderman, 2006). According to their competence expectancies, high versus low, (Elliot & Church, 1997), or to the type of assessment, normative versus formative (Pulfrey, Buchs, & Butera, 2011), individuals will either pursue performance-approach goals or performance-avoidance goals. Thus, teachers, instructors, and managers, may be made more aware of the specific consequences that the goals engendered by the climates they produce have for conflicts likely to appear in working groups.

These studies also contribute to the achievement goal literature. Darnon *et al.* (2006) have shown that performance (approach) goals predict (competitive) relational conflict regulation. However, in this work goals were measured and not manipulated. The results of Study 3 provide an experimental confirmation that in a performance-approach goal context, conflict predicts competitive regulation more than in a performance-avoidance goal context. This prior work also made no theoretical distinction between performance-approach and performance-avoidance goals, or between competitive and protective regulation. Our studies fill this gap by showing that in the conflict framework – as is the case for other variables such as, for example, interest (Elliot & Harackiewicz, 1996), or achievement (Elliot & Church, 1997) – the distinction between approach and avoidance performance goals provides a greater degree of specification in predicting the effects of performance goals. Finally, Darnon, Harackiewicz *et al.*, (2007) have shown that socio-cognitive conflict can deplete task performance when individuals follow performance-approach goals, but not when they follow performance-avoidance goals. In academic or work groups, where conflict is highly likely to arise, such contexts may therefore hinder group performance. Future research should investigate further whether or not competitive and protective forms of conflict regulation mediate these links between performance goals and task performance.

Some limitations should be considered in relation to this work. Although the disproportion between men and women in the sample tested here is typical of Psychology departments, gender effects have been found both on conflict resolution strategies (e.g., Holt & DeVore, 2005; Reinisch & Sanders, 1986) and on goal endorsement (e.g., Dweck, 1986). Because men have been shown to be less likely to use cooperation strategies in conflict situations than women, one could expect male participants to regulate relational conflict in a competitive way regardless of the level of goal endorsement. Research with a more gender-balanced sample is needed in the future. Furthermore, in this research, the effects of performance goals on relational regulation were only assessed at the individual level. Thus, one might wonder how both the participant's *and* his/her partner's achievement goals together influence the development of conflict. This could represent

an appealing direction for future investigations. Finally, our research did not take relative status into account. Socio-cognitive conflicts occur in both classroom and organizational contexts that generate explicit status asymmetry (e.g., ranking, hierarchy). Future research needs to adress the potential moderating role of status on the link between performance goals and relational regulation.

Notwithstanding these limitations, this research represents both a theoretical and a practical contribution. Indeed, with Western countries profoundly influenced by neo-liberal values in all sectors of social activities (Kasser, Cohn, Kanner, & Ryan, 2007; Schwartz, 2007), it appears that most educational and work structures promote normative comparison and make performance goals quite salient and difficult to eradicate (cf. Urdan, 2004). The risk in such situations is that individuals perceive a disagreeing other as a threat, rather than an informational resource (e.g., Ryan & Pintrich, 1997), and that socio-cognitive conflict loses its benefits and becomes detrimental for learning (Smith, Johnson, & Johnson, 1981) and for satisfaction, commitment, group cohesion, and group performance (for a meta-analysis, see Wit, Greer, and Jehn, 2012). We thus agree with previous authors who have encouraged teachers or managers to create goal structures that do not imply normative evaluation, public comparison of performance, competition, and other factors shown to enhance performance-approach or performance avoidance goals (for reviews, see Ames, 1992; Dragoni, 2005; Meece *et al.*, 2006).

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References

Ames, C. (1992). Classrooms: Goals, structures, and students motivation. *Journal of Educational Psychology*, *84*, 261–271. doi:10.1037/ 0022-0663.84.3.261

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, *64*, 359–372. doi:10.1037/h0043445

Bipp, T., Steinmayr, R., & Spinath, B. (2008). Personality and achievement motivation: Relationship among Big Five domain and facet scales, achievement goals, and intelligence. *Personality and Individual Differences*, *44*, 1454–1464. doi:10.1016/j.paid.2008.01.001

Boardley, I. D., & Kavussanu, M. (2010). Effects of goal orientation and perceived value of toughness on antisocial behavior in soccer: The mediating role of moral disengagement. *Journal of Sport & Exercise Psychology*, *32*, 176–192.

Buchs, C., Butera, F., Mugny, G., & Darnon, C. (2004). Conflict elaboration and cognitive outcomes. *Theory into Practice*, *43*, 23–30. doi:10.1207/s15430421tip4301_4

Butera, F., Darnon, C., & Mugny, G. (2010). Learning from conflict. In J. Jetten & M. Hornsey (Eds.), *Rebels in Groups: Dissent, deviance, difference and defiance* (pp. 36–53). Oxford, UK: Wiley-Blackwell.

Butera, F., & Mugny, G. (1995). Conflict between incompetences and influence of a low expertise source in hypothesis testing. *European Journal of Social Psychology*, *25*, 457–462.doi:10.1002/ejsp.2420250408

Butera, F., & Mugny, G. (2001). Conflicts and social influences in hypothesis testing. In C. K. W. De Dreu & N. K. De Vries (Eds.), *Group consensus and minority influence. Implications for innovation* (pp. 161–182). Oxford, UK: Blackwell.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. (2nd ed.) Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Cohen, J. (1994). The earth is round (p < .05). *American Psychologist*, *49*, 997–1003. doi:10.1037//0003-066X.49.12.997

Cohen, F., & Lazarus, R. S. (1979). Coping with the stresses of illness. In G. C. Stone, F. Cohen & N. E. Adler (Eds.), *Health Psychology: A handbook* (pp. 217–254). San Francisco: Jossey-Bass.

Conroy, D. E., Elliot, A. J., & Thrash, T. M. (2009). Achievement motivation. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 382–399). New York: Guilford.

Costa, P. T. Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.

Darnon, C., & Butera, F. (2005). Buts d'accomplissement, stratégies d'étude, et motivation intrinsèque: Présentation d'un domaine de recherche et validation française de l'échelle d'Elliot et McGregor (2001) [Achievement goals, study strategies, and intrinsic motivation: Presenting a research field and the French validation of Elliot and McGregor's scale (2001)]. *L'Année Psychologique*, *105*, 105–131. doi:10.3406/psy.2005.3821

Darnon, C., & Butera, F. (2007). Learning or succeeding? Conflict regulation within mastery and performance goals. *Swiss Journal of Psychology*, *66*, 145–152. doi:10.1024/1421-0185.66.3.145

Darnon, C., Butera, F., & Harackiewicz, J. M. (2007). Achievement goals in social interactions: Learning within a mastery vs. performance goal. *Motivation and Emotion*, *31*, 61–70. doi:10.1007/s11031-006-9049-2

Darnon, C., Dompnier, B., Delmas, F., Pulfrey, C., & Butera, F. (2009). Achievement goal promotion at University: Social desirability and social utility of mastery and performance goals. *Journal of Personality and Social Psychology*, *96*, 119–134. doi:10.1037/a0012824

Darnon, C., Harackiewicz, J. M., Butera, F., Mugny, G., & Quiamzade, A. (2007). Performance-approach and performance-avoidance goals: When uncertainty makes a difference. *Personality and Social Psychology Bulletin*, *33*, 813–827. doi:10.1177/0146167207301022

Darnon, C., Muller, D., Schrager, S., Pannuzzo, N., & Butera, F. (2006). Mastery and performance goals predict epistemic and relational conflict regulation. *Journal of Educational Psychology*, *98*, 766–776. doi:10.1037/0022-0663.98.4.766

De Dreu, C. K. W. (1997). Productive conflict: The importance of conflict issue and conflict management. In C. K. W. De Dreu & E. Van de Vliert (Eds.), *Using conflict in organizations* (pp. 9–22). London: Sage.

De Dreu, C. K. W. (2008). The virtue and vice of workplace conflict: Food for (pessimistic) thought. *Journal of Organizational Behavior*, *29*, 5–18. doi:10.1002/job.474

De Wit, F. R. C., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology*, *97*, 360–390. doi:10.1037/a0024844

Dillard, J. P., Wilson, S. R., Tusing, K. J., & Kinney, T. A. (1997). Politeness judgments in personal relationships. *Journal of Language and Social Psychology*, *16*, 297–325. doi:10.1177/0261927X970163003

Doise, W., & Mugny, G. (1984). *The social development of the intellect*. Oxford: Pergamon Press.

Doise, W., Mugny, G., & Perret-Clermont, A. N. (1975). Social interaction and the development of cognitive operations. *European Journal of Social Psychology*, *5*, 367–383. doi:10.1002/ejsp.2420050309

Dragoni, L. (2005). Understanding the emergence of state goal orientation in organizational work groups: The role of leadership and multilevel climate perceptions. *Journal of Applied Psychology*, *90*, 1084–1095. doi:10.1037/0021-9010.90.6.1084

Dunn, J. G. H., & Causgrove-Dunn, J. C. (1999). Goal orientations, perceptions of aggression, and sports personship in elite male youth ice hockey players. *The Sport Psychologist*, *13*, 183–200.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*, 1040–1048. doi:10.1037/0003-066X.41.10.1040

Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–189. doi:10.1207/s15326985ep3403_3

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*, 218–232. doi:10.1037/0022-3514.72.1.218

Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, *70*, 461–475.

Elliot, A. J., & McGregor, H. A. (2001). A 2*2 achievement goal framework. *Journal of Personality and Social Psychology*, *80*, 501–519. doi:10.1037/0022-3514.72.1.218

Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology*, *100*, 613–628. doi:10.1037/0022-0663.100.3.613

Elliot, A. J., & Thrash, T. M. (2002). Approach–avoidance motivation in personality: Approach and avoidance temperaments and goals. *Journal of Personality and Social Psychology*, *82*, 804–818. doi:10.1037/0022-3514.82.5.804

Holt, J. L., & DeVore, C. J. (2005). Culture, gender, organizational role, and styles of conflict resolution: A meta-analysis. *International Journal of Intercultural Relations*, *29*, 165–196. doi:10.1016/j.ijintrel.2005.06.002

Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leadermember exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal*, *45*, 368–384. doi:10.2307/20159587

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, *40*, 256–282. doi:10.2307/2393638

Johnson, D. W., Johnson, R. T., & Tjosvold, D. (2000). Constructive controversy: The value of intellectual opposition. In M. Deutsch & P. T. Coleman (Eds.), *The handbook of conflict resolution: Theory and practice* (pp. 65–85). San Francisco: Jossey-Bass Inc. Publishers.

Judd, C. M., & McClelland, G. H. (1989). *Data analysis: A model comparison approach*. San Diego: Harcourt, Brace, Jovanovich.

Kasser, T., Cohn, S., Kanner, A. D., & Ryan, R. M. (2007). Some costs of American corporate capitalism: A psychological exploration of value and goal conflicts. *Psychological Inquiry*, *18*, l–22.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

Meece, J., Anderman, E. M., & Anderman, L. H. (2006). Classroom goalstructure, student motivation, and academic achievement. *Annual Review of Psychology*, *57*, 487–503. doi:10.1146/annurev.psych.56.091103.070258

Mugny, G., & Doise, W. (1978). Socio-cognitive conflict and structure of individual and collective performances. *European Journal of Social Psychology*, *8*, 181–192. doi:10.1002/ejsp.2420080204

Mugny, G., De Paolis, P., & Carugati, F. (1984). Social regulations in cognitive development. In W. Doise & A. Palmonari (Eds.), *Social interaction in individual development* (pp. 127–146). Cambridge: Cambridge University Press.

Muller, D., & Butera, F. (2007). The focusing effect of self-evaluation threat in coaction and social comparison. *Journal of Personality and Social Psychology*, *93*, 194–211. doi:10.1037/0022-3514.93.2.194

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, *91*, 328–346. doi:10.1037/0033-295X.91.3.328

Pinkley, R. L. (1990). Dimensions of conflict frame: Disputant interpretations of conflict. *Journal of Applied Psychology*, *75*, 117–126. doi:10.1037/0021-9010.75.2.117

Poortvliet, M., & Darnon, C. (2010). Towards a more social understanding of achievement goals: The interpersonal effects of mastery and performance goals. *Current Directions in Psychological Science*, *19*, 324–328. doi:10.1177/0963721410383246

Psaltis, C., & Duveen, G. (2006). Social relations and cognitive development: The influence of conversation type and representations of gender. *European Journal of Social Psychology*, *36*, 407–430. doi:10.1002/ejsp.308

Pulfrey, C., Buchs, C., & Butera, F. (2011). Why grades engender performance avoidance goals: The mediating role of autonomous motivation. *Journal of Educational Psychology*, *103*, 683–700. doi:10.1037/a0023911

Quiamzade, A. (2007). Imitation and performance in confrontations between competent peers: The role of the representation of the task. *European Journal of Psychology of Education*, *22*, 243–258. doi:10.1007/BF03173424

Quiamzade, A., & Mugny, G. (2009). Social influence and threat in confrontations between competent peers. *Journal of Personality and Social Psychology*, *97*, 652–666. doi:10.1037/a0015822

Quiamzade, A., Mugny, G., & Darnon, C. (2009). The coordination of problem solving strategies: When low competence sources exert more influence on task processing than high competence sources. *British Journal of Social Psychology*, *48*, 159–182. doi:10.1348/014466608X311721

Reinisch, J. M., & Sanders, S. A. (1986). A test of sex differences in aggressive response to hypothetical conflict situations. *Journal of Personality and Social Psychology*, *50*, 1045–1049. doi:10.1037/0022-3514.50.5.1045

Ryan, A. M., & Pintrich, P. R. (1997). Should I ask for help? The role of motivation and attitudes in adolescents' help seeking in math class. *Journal of Educational Psychology*, *89*, 329–341. doi:10.1037/0022-0663.89.2.329

Schwartz, S. H. (2007). Cultural and individual value correlates of capitalism: A comparative analysis. *Psychological Inquiry*, *18*, 52–57. doi:10.1080/10478400701388963

Schwarz, B. B., Neuman, Y., & Biezuner, S. (2000). Two wrong may make a right… if they argue together! *Cognition and Instruction*, *18*, 461–494. doi:10.1207/S1532690XCI1804_2

Smith, K., Johnson, D. W., & Johnson, R. T. (1981). Can conflict be constructive? Controversy versus concurrence seeking in learning groups. *Journal of Educational Psychology*, *73*, 651–663. doi:10.1037/0022-0663.73.5.651

Tanaka, A., Murakami, Y., Okuno, T., & Yamauchi, H. (2001). Achievement goals, attitudes toward help seeking, and help-seeking behavior in the classroom. *Learning and Individual Differences*, *13*, 23–36. doi:10.1016/S1041-6080(02)00043-2

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology, 21* (pp. 181–227). New York: Academic Press.

Toma, C., & Butera, F. (2009). Hidden profiles and concealed information: Strategic information sharing and use in group decision making. *Personality and Social Psychology Bulletin*, *35*, 793–806. doi:10.1177/0146167209333176

Toma, C., Gilles, I., & Butera, F. (2011). Strategic use of preference confirmation in group decision making: The role of competition and dissent. *British Journal of Social Psychology*. Advance online publication. doi:10.1111/j.2044-8309.2011.02037.x

Toma, C., Vasiljevic, D., Oberlé, D., & Butera, F. (2012). Assigned experts with competitive goals withhold information in group decision making. *British Journal of Social Psychology*. Advance online publication. doi:10.1111/j.2044-8309.2012.02105.x

Urdan, T. (2004). Can achievement goal theory guide school reform? In P. R. Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement*, (pp. 361–392). Oxford: Elsevier.

Yamaguchi, R. (2001). Children's learning groups: A study of emergent leadership, dominance, and group effectiveness. *Small Group Research*, *32*, 671–697. doi:10.1177/104649640103200601

Yzerbyt, V., Muller, D., & Judd, C. M. (2004). Adjusting researchers' approach to adjustment: On the use of covariates when testing interactions. *Journal of Experimental Social Psychology*, *40*, 424–431. doi:10.1016/j.jesp.2003.10.001