

Examining the effects of mastery and performance goals on information exchange processes

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For decades, the effects of achievement goals on various aspects of individual task performance have been examined. Although these goals are often pursued in social contexts, surprisingly little research has focused on interpersonal effects of achievement goals. One process that is particularly important for successful task performance is the exchange of information between individuals, because by doing so people can profit from their collective task-related knowledge and skills. In this paper, the author reviews extant achievement motivation research that focuses on interpersonal processes. In addition, the results of recent studies on the effects of achievement goals on information exchange processes are presented and discussed. (*Netherlands Journal of Psychology* 65, 53-61.)

Keywords: achievement motivation; information giving; information utilisation; reciprocity; exploitation; performance feedback

Information exchange is ubiquitous. In fact, a great part of dealings between people consists of a continuous flow of information going back and forth. Throughout the day people write and receive e-mails, make phone calls, ask colleagues for advice, have dinner conversations, chat with the neighbour, and so forth. So, in daily life individuals give and receive information on different occasions, in different quantities, and in different ways.

Of course, a large portion of our information exchanges are quite trivial and take place for no reason other than that people are social beings and act accordingly by engaging in exchanges.

However, information exchange can be very instrumental if not vital when people perform tasks to achieve goals. For example, when individuals are working in organisations, doing sports, or learning in the classroom, they are very often in the presence of peers or co-workers. Some of them may have task-related information that others do not possess, so the exchange of information may be highly important for the attainment of goals. When individuals choose to share their information with one another, they can both profit from this and can boost their performance accordingly. Through the principle of reciprocity (Gouldner, 1960), giving information to others might result in receiving information back at some later point in time. Therefore, the exchange of information can be regarded as vital for the functioning of people who pursue goals

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Received 1 July 2008; revision accepted 29 April 2009.

in social achievement situations (e.g., O'Reilly, 1977; Weick & Roberts, 1993).

Information giving can be employed to share high-quality (that is, good and useful) information with others, such as when you give advice to a colleague about work-related matters. In a different vein, people can intentionally share low-quality (poor and useless) information with others. For example, when individuals are in competition with one another, they may have the intention to confuse and outperform the other, and accordingly share information that is in fact worthless.

In this paper I review recent research that shows that the achievement goals that individuals pursue in achievement situations crucially influence how they perceive and act in social situations. Notably, whether people are striving to improve their own performance, as compared with attempting to outperform those around them, this has consequences for their dealings with others in general, and the quality and quantity of their information exchange processes and outcomes in particular. For example, people who have the goal to improve their own skills have fewer reasons to keep their most useful knowledge to themselves than people who have the goal to outperform their exchange partners.

An achievement goal approach to information exchange

When people who are engaged in achievement situations become involved in information exchange they can, and do, pursue different achievement goals. Achievement goals reflect the purpose of an individual's achievement pursuits in a particular situation (Harackiewicz & Sansone, 1991; for an overview, see Elliot, 2005). Most attention in the achievement goal tradition has focused on two types of goals: mastery goals and performance goals. In this tradition, a mastery goal involves the purpose of developing competence, gaining skill, and doing one's best, whereas a performance goal reflects the purpose of demonstrating one's superior competence by outperforming others (Dweck, 1986; Elliot, 2005; Nicholls, 1984). People who strive for mastery goals predominantly compare their present performance with their previous performance, and thus develop a self-referenced focus on outcomes in achievement situations (Van Yperen, 2003). In contrast, people who pursue performance goals tend to compare their performances with those of others in order to monitor progress toward their desired goal, and by that they develop an other-referenced focus. Given this disparity of focus, people who pursue these different achievement goals develop distinct perceptual-cognitive frameworks with which they approach and construct information exchanges with others (cf. Dweck, 1986).

To date, the theory and research on achievement goals has mainly focused on exploring cognition, affect, and behaviour related to task engagement and task performance in individual-level settings (for recent reviews, see DeShon & Gillespie, 2005; Elliot, 2005; Payne, Youngcourt, & Beaubien, 2007). However, little research has examined the crucially relevant *interpersonal effects* of achievement goals (cf. Poortvliet, Janssen, & Van Yperen, 2004). This is remarkable, because a lot of achievement situations do not take place in a vacuum, but are embedded in a social context instead. Quite recently, various researchers in work and organisational psychology have begun to examine the interpersonal consequences of achievement goals by exploring different interpersonal processes. I will now present a brief overview of these different lines of research that investigated effects of achievement goals on leader-member exchange, team adaptation, helping behaviour, and backing up behaviour.

With regard to leader-member exchange, the quality of the social exchange relationship between employees and their supervisors, Janssen and Van Yperen (2004) showed that mastery goals were positively related to leader-member exchange, which in turn led to in-role job performance, innovative job performance, and job satisfaction. Performance goals were negatively related to leader-member exchange, leading to lower levels of in-role job performance and job satisfaction. LePine (2005) showed that teams with difficult goals who were engaged in task performance were more likely to adapt to unforeseen changes when they had mastery goals than when they had performance goals. Also, this investigation showed that, relative to performance goal teams, team members with mastery goals were more supportive towards each other and exchanged more problem-focused information with each other. In line with this, investigations by Chiaburu, Marinova, and Lim (2007) and Porter (2005) revealed that mastery goals are positively related and performance goals are unrelated to giving help to co-workers and to backing up behaviour, which is defined as the provision of resources and effort to a team member when it is apparent that this team member is failing to reach his or her job-related goals.

Research in educational and developmental psychology has also explored interpersonal effects of achievement goals. Gehlbach (2006) showed that students' mastery goals were positively related and performance goals were unrelated to social perspective taking, the efforts to discern what others are thinking and feeling and how others perceive situations. Darnon and her colleagues showed that achievement goals have distinct effects with regard to socio-cognitive conflict regulation (Darnon, Muller, Schragar, Pannuzzo, & Butera, 2006). When individuals with mastery goals disagree with another person on a task, they engage in epistemic conflict regu-

lation: trying to figure whether it is possible to integrate different problem solutions. In contrast, performance goal individuals were more likely to engage in relational conflict regulation, which means that one is reacting defensively to the other and trying to show that the other is wrong. Several other studies found mastery goals to be negatively connected, and performance goals to be positively connected, to cheating attitudes and behaviours (e.g., Anderman, Griesinger, & Westerfield, 1998; Newstead, Franklyn-Stokes, & Armstead, 1996). Similarly, research in sport psychology found consistent patterns showing mastery goals to be beneficial and performance goals detrimental for social-moral functioning, sportspersonship, and morally constructive team norm perceptions (e.g., Ommundsen, Roberts, Lemyre, & Treasure, 2003).

In the following section, I shift the focus of this interpersonal research onto achievement goals by presenting some of my own work that shows that individuals driven by different achievement goals act in distinct ways when they exchange information with others. Since people function both as information senders and as information receivers, I have considered the impact of achievement goals on the actions and perceptions of individuals both when they give information and when they receive information. This line of research amends the earlier ones discussed above by investigating the impact of achievement goals on various aspects of information exchange between individuals, in particular exchanges that involve information that is relevant for the execution of tasks. Gaining more insight into these specific effects of achievement goals on task-related information exchange is important because people in achievement situations are frequently in the presence of their peers, co-workers, or rivals. Moreover, people frequently exchange task-related information with others, such as when individuals work in the same project team. So, in various ways, people can depend on others to accomplish their goals and task-related information exchange plays a crucial role in this regard.

Achievement goals and information giving

The investigation of the effects of achievement goals on information exchange started by looking at how achievement goals affect people's openness when they give information to their

exchange partners. Experiments¹ showed that, relative to individuals with a mastery goal, performance goal individuals were less open in their task-related information giving (Poortvliet, Janssen, Van Yperen, & Van de Vliert, 2007). Furthermore, two underlying psychological processes of this effect were identified. Compared with performance goal individuals, mastery goal individuals turned out to have a stronger reciprocity orientation, the confidence that giving high-quality information results in receiving high-quality information back, than performance goal individuals. Conversely, compared with mastery goal individuals, performance goal individuals had a stronger exploitation orientation, defined as the reluctance to share high-quality information with an exchange partner.

In another study that elaborated on the investigation described above, the effects of achievement goals on information giving were further explored (Poortvliet, Janssen, Van Yperen, & Van de Vliert, in press). Specifically, in this study the important role that individual performance feedback plays was scrutinised. Performance feedback is a crucial mechanism that can direct people's efforts to the attainment of their personal achievement goals (e.g., Senko & Harackiewicz, 2005). For this reason, the specific achievement goals individuals strive for and the valence of performance feedback that they receive during task execution are both important factors in predicting social exchange behaviour.

The results indicated that performance feedback moderates the effects of individuals' achievement goals on information exchange when they are involved in task performance. It

1 The experiment consisted of performing the winter survival exercise (WSE; Johnson & Johnson, 2000). This exercise involved reading a scenario that described the crash landing of a plane in a very cold and desolate area. Both pilots were killed in the crash and the plane was lost. However, the surviving passengers managed to salvage twelve items from the plane (e.g., a hand axe, a compass, a lighter). After reading this scenario, the participants were instructed to think about and write down the possible advantages and disadvantages of each of the twelve items on a form. Then the participants ranked the twelve items in order of their importance for survival on a piece of paper and entered this ranking into the computer. Then participants were informed that another participant had simultaneously carried out this assignment and that they would now exchange rankings of the twelve items with this other person. In reality, however, the information about the other person was simulated by the computer. Further, in line with Van Yperen (2003), the following achievement goals were assigned: 'perform better on your final ranking as compared with your first ranking' (mastery goal), or 'perform better on your final ranking as compared with the other' (performance goal). Participants were instructed that they would first give a ranking of the twelve items to the other, then would receive a ranking from the other, after which they would make a final individual ranking.

was demonstrated that mastery goal individuals who received positive performance feedback were more open in giving information about their task performance to exchange partners relative to mastery goal individuals who received negative feedback and performance goal individuals (who received either negative or positive feedback). Furthermore, it was also found that this overall moderation could be explained by individuals' exchange orientation. Specifically, relative to performance goals, mastery goals led to a stronger reciprocity orientation and a weaker exploitation orientation. Also, mastery goal individuals reported to have given better task-related information than performance goal individuals. So, because of their strong reciprocity orientation, when individuals with mastery goals received negative performance feedback, they chose to first invest in their task performance before they shared task-related information with their exchange partners.

Achievement goals and information utilisation

Because people do not only function as information senders, but as receivers of information as well, it was also investigated to which extent achievement goals influence people to utilise information that they receive from their exchange partners (Poortvliet et al., 2007). In a first study, participants received high-quality information from an exchange partner. It turned out that performance goal individuals utilised more of this high-quality information, relative to individuals with a mastery goal. However, in a second study, participants received low-quality information from their exchange partner. This time, performance goal individuals utilised less of this low-quality information than mastery goal individuals. Also, it was found that performance goal individuals more accurately judged the information that they received to be of lower quality than mastery goal individuals, thereby explaining why performance goal individuals utilised low-quality information to a lesser extent. So, in these two studies performance goal individuals, relative to mastery goal individuals, were better able to profit from the information that they received from their exchange partners by utilising more high-quality information and disregarding more low-quality information. Self-evidently, this leads to a better task performance by performance goal individuals.

Combined effects of achievement goals and ranking information

In the last investigation that will be reviewed here, the joint effects of achievement goals and ranking information on information exchange intentions towards a commensurate exchange

partner, and interpersonally harmful behaviour towards an exchange partner were investigated (Poortvliet, Janssen, Van Yperen, & Van de Vliert, 2009). Ranking information is a specific form of performance feedback that provides meaningful points of reference by which it is possible to compare one's task-related performance with that of others. For example, by looking at the ATP tennis ranking it is possible to see how tennis players perform based on the specific rank that they occupy.

It was found that for performance goal individuals, there was a negative curvilinear relationship between individuals' ranks and collaboration intentions. Accordingly, when performance goal individuals had low or high ranks, they were less willing to collaborate than when they had intermediate rankings. In contrast, for mastery goal individuals a negative linear relationship surfaced: higher ranks caused a weaker intention to collaborate. So, especially when ranks were low, a difference with regard to collaboration intentions between individuals with mastery and performance goals surfaced.

In a second study, in a context in which people are locked in an information exchange situation rather than a situation where they can choose whether or not to engage in information exchange, it was found that performance goal individuals were more willing than mastery goal individuals to harm their exchange partner's task performance by setting the level of white noise that the other allegedly would hear during task execution. Also, it was shown that for individuals with mastery goals a positive linear relationship between their ranks and intensity of interpersonally harmful behaviour towards exchange partners existed. Again, especially when ranks were low, a difference between mastery and performance goal individuals became apparent. Altogether, the findings of these two studies give indications for the idea that relative to performance goals, mastery goals are more beneficial for exchange relationships, in terms of a higher willingness to collaborate and lower levels of harmful behaviour, and particularly so among low-ranked individuals.

The lines of research that are reviewed above all revolve around how individuals deal with others when they find themselves in information exchange situations. It is therefore relevant to explore how these individuals value their own interest and the interest of others. In this light, I will now discuss the relationship between social value orientation theory (SVO; Messick & McClintock, 1968) and achievement goals in an interpersonal context. Also, the moderating effects of different kinds of performance feedback were investigated. Therefore, a brief integration of the combined effects of achievement goals and performance feedback on information exchange processes is provided. Finally, in order to give a cautious answer to the question which specific achievement goal is more beneficial in informa-

tion exchange situations, I will highlight the findings of the discussed investigations with regard to performance effects and implications for the quality of interpersonal relationships.

Relationship with social value orientations

In the current paper, I have reviewed how achievement goals lead to differences in openness in information giving by identifying two exchange orientations that underlie this behaviour. Specifically, mastery goals lead to a relatively stronger reciprocity orientation and performance goals lead to a relatively stronger exploitation orientation. It will not be unexpected that performance goals elicit competitive behaviour as individuals with these goals strive to outperform their counterparts. However, the idea that mastery goals lead to cooperative effects in information exchange settings may come as somewhat of a surprise. In this regard, the social value orientation construct is especially relevant, because this construct deals with how individuals value their own outcomes and how they value the outcomes of others. In the following, I will first identify the differences and similarities between social value orientations and exchange orientations.

The SVO tradition distinguishes three basic motivational patterns: *cooperation* (to maximise positive outcomes for self and other, while maintaining equity between the two actors), *individualism* (to maximise positive outcomes for self, with no concern for the other's outcomes), and *competition* (to maximise positive outcomes for self and minimise them for the other; Messick & McClintock, 1968). Cooperation has been characterised as a prosocial orientation, whereas individualism and competition are often collectively labelled as proself orientations. Also, across different studies it has been shown that relative to individuals who hold prosocial (i.e., cooperative) orientations, people with a proself (i.e., individualistic or competitive) orientation show stronger exploitative behaviours towards others (e.g., Van Lange, 1999).

As already stated, it is quite easy to see the performance goal in the reported studies overlapping with the social value orientation of competition. However, at first sight it may be less clear which specific social value orientation the mastery goal captures. When people are pursuing a mastery goal, they are basically just trying to improve their own performance. So, in that sense they have a very individualistic goal. The question is, of course, whether a mastery goal will elicit individualism or cooperation.

In the framework that I have introduced mastery and performance goals are considered (and tested) as *determinants* of reciprocity and exploitation orientations, respectively. Reciprocity and exploitation orientations, rather than mastery and performance goals, may capture the social

value orientation of cooperation and competition, respectively. For example, in SVO research, competition is typically defined as striving to have the greatest relative advantage over other's outcomes (e.g., Van Lange, 1999) which is quite similar to the definition of an exploitation orientation.

The assumption that mastery goals may produce prosocial behaviour (i.e., a reciprocity orientation) is partly based on extant research literature that showed mastery goals to be connected to moral and cooperative behaviour in different contexts. For example, Gehlbach (2006) showed for students that shifting towards a mastery goal was positively related to social perspective taking (the propensity to try and discern what others are thinking and feeling and how others perceive the situation). Porter (2005) showed that high mean levels of mastery goals in teams were positively related to backing up behaviour (provision of resources and effort to help team members in reaching their goals when these team members are apparently failing to reach those goals). So all in all, there is really a great deal of research that shows relationships between mastery goals and various forms of cooperative behaviour.

However, the way mastery goals are typically operationalised is purely individualistic in nature (improve *yourself*; cf. Van Yperen, 2003). So, how is it possible that mastery goals show similarity with an individualistic value orientation on the one hand, whereas on the other hand these goals turned out to produce cooperative behaviour, both in the investigations that deal with information exchange and in other recent research that looked at other interpersonal effects of achievement goals? Individuals with mastery goals have no outcome interdependence with their exchange partners, because they reach their goal when they improve their individual performance regardless of the others' performance (cf. Johnson & Johnson, 1989). However, instead of outcome interdependence, mastery goal individuals may perceive positive means interdependence with their exchange partners. Information exchange can serve as an important means by which they can reach their individual goal of self-improvement. These perceptions of positive means interdependence associated with mastery goals can be expected to enhance an individual's willingness to act in cooperative ways towards exchange partners in order to obtain useful task-related information. So, although mastery goals show a resemblance to an individualistic orientation, people who pursue mastery goals may, and do, adopt cooperative strategies (e.g., Porter, 2005).

Furthermore, and not unimportant, the recent research that I have reviewed deals with task-related information exchange, which differs fundamentally from the variables that are typically studied in social value orientation research (for example the distribution of limited and fixed

resources such as money or chips in negotiations or social dilemma situations). To illustrate this point: if two actors each have three dollars and they both decide to give the other their money, they still end up with three dollars. But if two actors each have three unique ideas and they decide to tell the other their ideas, they both end up with six ideas. Also, in the case of defection by the exchange partner, the actor still retains the original three ideas, while in the money example the actor will be left behind with empty pockets. So, when it comes to information exchange, a cooperative strategy does not do harm when one is trying to improve oneself, because giving information to an exchange partner implies that one does not lose this information, one rather *shares* it. And, when one is lucky enough to meet a cooperative exchange partner, there is a large potential to profit from this information exchange situation. Future research should investigate whether individuals with mastery and performance goals perceive means and outcome interdependence structures in different ways.

Effects of performance feedback

The research that I have presented showed that two different kinds of performance feedback have an important moderating role on the effect of achievement goals on different aspects of information exchange behaviour. For one thing, it was shown that, upon receiving negative performance feedback, mastery goal individuals responded by investing in their task efforts before they shared task-relevant information with their exchange partner (Poortvliet et al., in press). In contrast, performance goal individuals did not choose to share valuable information, as was indicated by their relatively strong exploitation orientation. So, these results were in keeping with the finding that, without receiving performance feedback, performance goal individuals are less inclined to display prosocial information sharing behaviour than mastery goal individuals. In contrast, mastery goal individuals are guided by the performance feedback that they receive to try to give valuable information to their exchange partners and act according to their reciprocity orientation. This finding is also in line with the idea that mastery goal individuals tend to perceive negative feedback from an instrumental perspective (Ashford, Blatt, & VandeWalle, 2003). From this perspective, negative feedback suggests that there is potential room for improvement and by that, it gives mastery goal individuals directions for attaining their personal goal.

Second, the effects of a specific form of performance feedback, commensurate ranking feedback, were investigated (Poortvliet et al., 2009). This particular investigation nuances the earlier findings in two important ways by showing that mastery goal individuals may not always act co-

operatively, and that performance goal individuals may not always act competitively in information exchange situations. With regard to mastery goals it was found that the intention to engage in task-related interactions with others became stronger, and behaviour that interfered with the other's task performance became weaker when mastery goal individuals' ranks decreased. Put differently: upon learning that mastery goal individuals were performing well they were less apt to collaborate with others and were less shy to interfere with the other's task performance. For performance goal individuals it turned out that they behaved especially competitively under low and high ranking situations, but less so under intermediate ranking situations. This is in line with recent research showing that when people score at the top or bottom of a ranking, their feelings of competition increase and their willingness to collaborate with commensurate others diminishes (Garcia, Tor, & Gonzalez, 2006).

Taken together, the reviewed investigations indicate that performance feedback importantly moderates the effects of achievement goals on a variety of information exchange phenomena and in that way these outcomes contribute to the performance feedback literature (e.g., DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004; Senko & Harackiewicz, 2005).

Achievement goals and actual task performance

A pervasive and recurring discussion in the achievement goal domain is which goal has the most desirable consequences and should hence be promoted (e.g., Elliot, 2005). Of course, the answer to this query depends heavily on which outcomes one focuses on. Since achievement goals deal with human achievement, it seems very natural and appealing to focus on performance effects when one evaluates the merits of mastery versus performance goals². In this regard, a review limited to educational contexts by Harackiewicz and her colleagues found that performance goals were typically positively related to academic performance outcomes, whereas mastery goals were unrelated to these outcome measures (but positively related to task interest; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002). In contrast, a study by Bell and Kozlowski (2002) found mastery goals to be positively related to, and performance goals to be negatively related to task performance. To complicate things even further, a meta-analysis by Payne

² In this regard, it must be noted that reviewing earlier findings is complicated by the fact that different scholars have conceptualised and operationalised achievement goals in quite different ways (for a profound overview, see DeShon & Gillespie, 2005).

and colleagues (2007) found mastery goals to be generally positively related to academic performance measures, whereas performance goals were unrelated. With regard to task and job performance, this meta-analytic study showed that both mastery and performance goals seemed to be beneficial. Other work has also addressed the complex relationship between mastery and performance goals and their respective effects on performance outcomes³ (e.g., Grant & Dweck, 2003). Given the controversy that surrounds this issue, it seems safe to conclude at this point that the answer to which specific achievement goal better predicts individuals' task performance is just too close to call.

Given that the primary scope of the present paper is an interpersonal one, namely information exchange behaviours, it is both interesting and relevant to take a look at some performance-related effects in recent interpersonally oriented achievement goal research. Work on leader-member exchange showed that mastery goals were positively related to in-role job performance and innovative job performance, whereas performance goals were negatively related to in-role job performance and unrelated to innovative job performance (Janssen & Van Yperen, 2004). Interestingly, the quality of leader-member exchange explained why mastery goal individuals were more effective on the job. A related finding by Bunderson and Sutcliffe (2003) indicated that when mastery goals are properly adopted, these goals can contribute to team performance.

In the reviewed research it was found that, relative to mastery goal individuals, performance goal individuals utilised more high-quality information and less low-quality information from their exchange partners. Further analyses showed that this observation could be accounted for by the fact that performance goal individuals were better able to accurately judge the quality of the information that they received, compared with mastery goal individuals. So, on the basis of these preliminary findings one would be tempted to conclude that performance goals in information exchange contexts lead to more desirable performance effects than mastery goals do. But I think there is enough reason to argue that it is not as simple as that. The results of this investigation also showed that individuals with performance goals were less open about their task performance than mastery goal individuals, and that they, regardless of their own or the other's level of prior performance, had lower confidence in the other's actions. Also, when they had

the opportunity to hinder the other's task performance, they did so much more strongly than mastery goal individuals did.

On the basis of these different findings I conclude that in situations in which information exchanges are involved or possible, performance goals are, relative to mastery goals, detrimental to exchange relationships. In this light it is not a bold statement that when individuals bring performance goals into information exchange contexts, on the long run they might end up with little information to profit from because others are probably not very likely to enjoy being used.

This statement relates nicely to the recent work in the negotiation domain by Kray and Haselhuhn (2007). They showed that individuals who see negotiation skills as malleable (i.e., incremental theorists) were more likely to set mastery goals for themselves than individuals who rather see negotiation skills as fixed (so called entity theorists). More importantly, incremental theorists were able to outperform the entity theorists when it came to actual negotiating. Just as negotiations, information exchange situations are characterised by a tension between creating and claiming value (cf. Lax & Sebenius, 1986). In this manner, sharing and combining unique ideas has the potential to increase the size of the pie that exchange partners can profit from. The reciprocity orientation that is adopted by mastery goal individuals will presumably create a lot of information and the probable high quality of the exchange relationship will likely ensure that mastery goal individuals can effectively profit from this information. Of course, in the reviewed information exchange studies the results were yielded by using an experimental paradigm. Further (field) research needs to be conducted to investigate the external validity of the obtained results, before it is possible to draw firm conclusions and provide strong recommendations for organisational and educational contexts.

However, it is clear that the discussion above is in favour of the endorsement of mastery goals in information exchange situations. But overemphasising mastery goals may also have its drawbacks (e.g., Bunderson & Sutcliffe, 2003) and it would go too far to blindly rank performance goals lower than mastery goals. As I have also shown, performance goals do have the potential to effectively result in positive task performance outcomes. Also, research has suggested that pursuing both performance and mastery goals is most adaptive (e.g., Harackiewicz, Barron, & Elliot, 1998). Therefore, it may be wise to focus at times on specific performance targets without disregarding one's mastery goals (cf. DeShon & Gillespie, 2005).

³ It has been suggested that task performance may also be a cause of the adoption of performance-approach goals (Van Yperen & Renkema, 2008).

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