The Regulation of Positive Emotions in Social and Achievement Situations: Looking Beyond the Surface of "Positivity"

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Vorveröffentlichungen der Dissertation

Teilergebnisse dieser Dissertation wurden bereits in folgenden Beiträgen vorgestellt:

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Schall, M., Martiny, S. E., Goetz, T., & Hall, N. C. (2015). *Smiling on the Inside: The Social Benefits of Suppressing Positive Emotions in Outperformance Situations.*

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Konferenzbeiträge

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Eigenabgrenzung

Die vorliegende Arbeit ist unter der Mithilfe der Koautoren der zur Veröffentlichung eingereichten Manuskripte entstanden (siehe Vorveröffentlichungen der Dissertation).

Ich war hauptverantwortlich für die Idee zur Fragestellung der Dissertation, die Ideen der einzelnen Artikel sowie für den gesamten Forschungsprozess, angefangen von der Erstellung der Versuchsmaterialien, über die Erhebung und Auswertung, bis hin zum Verfassen des Manuskripts.

Contents

Summary

Research has shown that experiencing positive emotions is pleasurable, contributes positively to mental and physical health, and fosters the use of intellectual resources, such as creativity (Fredrickson, 1998, 2001; Lucas & Diener, 2001). Not surprisingly, researchers have proposed that individuals typically aspire to maintain their positive emotional experiences (Tugade & Fredrickson, 2007). Moreover, the expression of positive emotions has also been found to have social benefits. For instance, individuals who express their positive emotions are viewed as likeable and sociable by others (e.g., Reysen, 2005). In the present dissertation, I questioned whether there are situations in which individuals do not strive to experience and express positive emotions, despite the benefits of the experience and expression of positive emotions demonstrated in the previous research. Indeed, previous research shows that how individuals deal with, or, "regulate" their emotions, can largely be determined by the certain situation, such as situation-specific demands and individuals' goals and concerns in this situation (Campos, Walle, Dahl, & Main, 2011; Parrott, 1993; Tamir, 2005). Drawing on this research, I investigated the regulation of the experience and expression of positive emotions in two specific situations within two distinct lines of research, with positive emotions caused by a successful performance outcome.

In the first line of research, experimental studies investigated whether individuals suppress, this is, inhibit the expression of positive emotions in social situations in which they performed better than others (i.e., outperformance situations; Exline & Lobel, 1999; Friedman & Miller-Herringer, 1991). In two studies (N = 33 and N = 53, high-school students), the type of the social situation was manipulated (outperformance vs. non-outperformance) and the suppression of positive emotions was assessed. As predicted, results showed that individuals were more likely to suppress their positive emotions when they were in outperformance situations as compared to non-outperformance situations. Results further showed that the primary motivation underlying this suppression in outperformance situations was to appear considerate rather than act boastful in the presence of poor-performing others. In a third study (N = 195, high-school students), the prediction was tested stating that the suppression of positive emotions would be more socially beneficial than the expression of positive emotions, specifically

in the outperformance situation, as compared to non-outperformance situation. In this study, the social situation (outperformance vs. non-outperformance) and the expression of positive emotions of a target person (suppression vs. expression) were manipulated. Results showed that participants evaluated the person more positively when s/he suppressed rather than displayed positive emotions in the outperformance situation. As such, in line with the hypotheses, the findings from the first line of research show that when individuals are in the presence of worse-off others, they are more likely to suppress their positive emotions, rather than express them, and in doing so, are viewed more favorably.

In the second line of research, experimental studies investigated whether individuals savor their positive experiences following success, when a task has not yet been completed. It was assumed that when a task is in progress, individuals may focus on task completion (e.g., Katzir, Eyal, Meiran, & Kessler, 2010; Markman, Gavanski, Sherman, & McMullen, 1993) rather than on their positive emotional experiences. In the first study (N = 113, university students), participants' performance in a cognitive ability task (successful vs. average, i.e., "neutral") and completion of the task (task in progress vs. completed) were manipulated and savoring of the positive experience was assessed. In a second study (N = 83, soccer players), savoring was assessed following a successful versus neutral performance outcome after the first half of an actual soccer match (match in progress) and the end of the match (match completed). Results showed that individuals were less likely to savor their positive experience following success when they had not yet completed the task, as compared to when they had finished performing. The effect of task completion was also investigated in a third study (N = 115, university students), in which individuals' desire to engage in the pleasant experience after achieving success in a task was evaluated. Results showed that individuals expressed a lower desire to engage in an activity of a pleasant (not neutral and unpleasant) valence following success when the task was in progress as compared to completed. Together, in line with the hypotheses, the findings from the second line of research suggest that individuals appear not to savor and not want to savor their momentary success before a task has been finished.

As such, each line of research addressed very specific hypotheses by looking at the effects of situational factors on individuals' regulation of the experience and

expression of positive emotions in social and achievement settings. Despite the benefits of the experience and the expression of positive emotions demonstrated in the previous research, these findings show that there are indeed situations in which individuals may not prolong positive emotions, or suppress the expression of positive emotions, and may benefit from suppression. These findings suggest that individuals may encounter such situations in daily life, and thus underscore the importance for future research not only to investigate how individuals regulate their positive emotions, but also to take the specific situation into account when looking at the processes of emotion regulation. Future research should further examine the potential benefits of situation-dependent regulation of positive emotions, but also consider potential costs, such as for long-term happiness and well-being.

Zusammenfassung

Das Erleben von positiven Emotionen ist angenehm, trägt zur mentalen und physischen Gesundheit bei und fördert den Einsatz von intellektuellen Ressourcen wie beispielsweise Kreativität (Fredrickson, 1998, 2001; Lucas & Diener, 2001). Es überrascht daher nicht, dass in der Forschung angenommen wird, dass Menschen grundlegend danach streben, das positive emotionale Erleben aufrechtzuerhalten. Weiterhin wurde in Studien gezeigt, dass es auch soziale Vorteile bringt, positive Emotionen auszudrücken. So gelten Menschen, die ihre positiven Emotionen zeigen beispielsweise als sympathisch und kontaktfreudig (z.B. Reysen, 2005). In dieser Dissertation ging ich der Frage nach, ob trotz dieser Vorteile des Erlebens und des Ausdrucks von positiven Emotionen, Menschen in bestimmten Situationen nicht danach streben, ihre positiven Emotionen zu erleben und zu zeigen. Vergangene Forschung zeigt, dass die jeweilige Situation bzw. die Anforderungen und Ziele in dieser Situation, entscheidend mitbestimmen können, wie Menschen mit ihren Emotionen umgehen, d.h. diese „regulieren“ (Campos, Walle, Dahl, & Main, 2011; Parrott, 1993; Tamir, 2005). Ausgehend von dieser Forschung, wurde die Regulation des Erlebens und des Ausdrucks von positiven Emotionen nach einer erfolgreichen Leistung in zwei Situationen innerhalb von zwei verschiedenen Forschungslinien untersucht.

In der ersten Forschungslinie wurde in experimentellen Studien untersucht, inwieweit Menschen den Ausdruck ihrer positiven Emotionen in sozialen Situationen, in denen sie bessere Leistung erbracht haben als andere, d.h. „leistungsüberlegen“ sind (Exline & Lobel, 1999; Friedman & Miller-Herringer, 1991), unterdrücken. In zwei Studien (N = 33 und N = 53, Gymnasialschülerinnen und -schüler) wurde manipuliert, ob Teilnehmende im Vergleich zu anderen leistungsüberlegen waren versus nicht, und erfasst, inwieweit sie ihre positiven Emotionen in Gegenwart von anderen unterdrücken. Die Ergebnisse zeigten, dass wenn Teilnehmende eine bessere Leistung erbracht haben als andere, sie ihre positiven Emotionen stärker unterdrückten, als wenn sie im Vergleich zu anderen nicht leistungsüberlegen waren. Die Ergebnisse zeigten weiterhin, dass Teilnehmende ihre positiven Emotionen vorrangig aus der Motivation heraus unterdrückten, um sich in Gegenwart von anderen, die eine schlechtere Leistung erbracht haben, rücksichtsvoll und nicht überheblich zu verhalten. In einer dritten

Studie (*N* = 195, Gymnasialschülerinnen und -schüler) wurde die Annahme untersucht, dass es eine leistungsüberlegene Person im Vergleich zu einer nicht leistungsüberlegenen Person, positiver beurteilt wird, wenn sie ihre positiven Emotionen in Gegenwart von anderen unterdrückt, als wenn sie diese Emotionen zeigt. In dieser Studie wurde manipuliert, ob eine Person im Vergleich zu anderen leistungsüberlegen war versus nicht sowie der Ausdruck der positiven Emotionen der Person in Gegenwart von anderen (Ausdruck vs. Unterdrückung). Die Ergebnisse zeigten, dass Teilnehmende eine leistungsüberlegene Person positiver beurteilten, wenn sie ihre positiven Emotionen in Gegenwart von anderen unterdrückte, als wenn sie ihre positiven Emotionen zeigte. Insgesamt zeigen die Befunde der ersten Forschungslinie übereinstimmend mit den Hypothesen, dass Menschen in Gegenwart von anderen Personen, die eine schlechtere Leistung erbracht haben als sie selbst, ihre positiven Emotionen eher unterdrücken anstatt diese zu zeigen, und davon mehr soziale Vorteile haben.

In der zweiten Forschungslinie wurde in experimentellen Studien untersucht, inwieweit Menschen positives Erleben nach Erfolg auskosten, wenn eine weitere Leistung zu erbringen ist. Es wurde angenommen, dass wenn die Aufgabe noch nicht beendet ist, Menschen statt ihrer positiven Emotionen nach Erfolg die Aufgabe fokussieren (z.B. Katzir, Eyal, Meiran, & Kessler, 2010; Markman, Gavanski, Sherman, & McMullen, 1993). In der ersten Studie (*N* = 113, Studierende) wurde das Leistungsergebnis in einer kognitiven Aufgabe (erfolgreich vs. durchschnittlich, bzw. „neutral“) manipuliert und inwieweit die Aufgabe beendet oder noch nicht beendet ist. Es wurde erfasst, wie stark Teilnehmende ihr positives Erleben auskosten. In der zweiten Studie (*N* = 83, Fußballspieler) wurde erfasst, wie stark Fußballspieler ein erfolgreiches (versus neutrales) Ergebnis im Fußballspiel auskosten, und zwar, nach der ersten Halbzeit und am Ende des Spiels. Die Ergebnisse beider Studien zeigten, dass Teilnehmende das positive Erleben nach Erfolg weniger auskosteten, wenn die Aufgabe nicht beendet war als nach Beendigung der Aufgabe. Der Effekt des Aufgabenstatus wurde in einer dritten Studie (*N* = 115) untersucht, und zwar, auf das Streben nach angenehmen Erleben. Die Ergebnisse zeigten, dass Teilnehmende nach einer erfolgreichen Leistung weniger motiviert waren, eine Aktivität zu unternehmen, die angenehm (nicht neutral oder unangenehm) war, wenn die Aufgabe noch nicht beendet war als nach Beendigung der Aufgabe. Die Ergebnisse der zweiten Forschungslinie legen

nahe, dass Menschen ihr positives Erleben nach Erfolg in der Aufgabe nicht auskosten und nicht auskosten wollen, bevor die Aufgabe beendet ist.

Somit wurden innerhalb beider Forschungslinien spezifische Annahmen über die Regulation von Erleben und Ausdruck positiver Emotionen untersucht. Dabei wurde der Einfluss bestimmter situativer Faktoren im sozialen und leistungsbezogenen Kontext betrachtet. Die Befunde zeigen, dass trotz der Vorteile des Erlebens und des Ausdrucks von positiven Emotionen, es tatsächlich bestimmte Situationen gibt, in denen Menschen ihre positiven Emotionen nicht aufrechterhalten, diese Emotionen nicht zeigen, und davon unter Umständen mehr Vorteile haben. Die Befunde zeigen weiterhin, dass solche Situationen im Alltagsleben vorkommen können. Sie verdeutlichen damit, dass es nicht nur wichtig ist zu untersuchen, wie Menschen mit ihren positiven Emotionen umgehen, sondern auch den Einfluss der jeweiligen Situation auf die Prozesse der Emotionsregulation zu berücksichtigen. In Zukunft sollten die möglichen Vorteile der situationsabhängigen Regulation von positiven Emotionen erforscht werden, sowie mögliche Kosten, wie beispielsweise für das Wohlbefinden.

1 General Introduction

1.1 Defining Emotion Regulation: New Wine in an Old Bottle?

Are people influenced by their emotions or can people also influence them? This question has fascinated many researchers across various fields of psychology. More than 4000 academic journal articles appear when searching for „emotion regulation" in the title or abstract in the PsycInfo database, with the majority published within the last ten years.

According to the most often cited definition in the existing literature, emotion regulation involves "processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998b). Gross (1998a, b) proposed a process model of emotion regulation based on the view that emotions are multicomponential responses (e.g., Frijda, 1986; Lazarus, 1993; Smith & Ellsworth, 1985). More specifically, emotions unfold over time beginning with a stimulus event that is evaluated in terms of its relevance and other dimensions, and initiates a sequence of responses that are experiential, behavioral and physiological in nature. According to this model, emotions can be regulated at each phase of the emotion-generative process (see also Gross, 1999; Gross & Barrett, 2011; Gross & Thompson, 2007; John & Gross, 2007).

However, Gross' (1998b) definition of emotion regulation does not encompass all emotion-regulation processes. Rather, it presents a prototypical form of emotion regulation involving individual's conscious and effortful attempts to influence their own emotions (Gross, 1998b; Koole, 2009a). For example, this definition does not involve unconscious emotion-regulation processes or attempts made by individuals to influence other's emotions (Campos et al., 2011; Koole & Rothermund, 2011; Thompson, 1994). Accordingly, researchers have proposed other definitions (e.g., Thompson, 1994) and other models which also consider the regulation of moods, which are separated from emotions, for example, by the lack of a concrete eliciting stimulus event (Larsen, 2000; Larsen & Prizmik, 2004; Parkinson & Totterdell, 1999; Thayer, Newman, & McClain, 1994).

Importantly, although the research on emotion regulation "exploded" in the last decade, studies examining how individuals deal with their emotions have a longer tradition. The most influential precursor of emotion regulation is coping, which is defined as individuals' "efforts to manage external and/or internal demands that are appraised as exceeding the resources of the person" (Lazarus & Folkman, 1985, p.19; see also Lazarus, 1966). In other words, coping involves efforts made by individuals to manage stressful events and overcome stressful experiences (e.g., Folkman & Lazarus, 1980; Folkman, Lazarus, Gruen, & DeLongis, 1986). There exist important overlaps between research on coping and emotion regulation, as emotion-regulation research has also been typically concerned with individuals' efforts to reduce negative experiences. However, emotion-regulation processes involve a broader scope of changes in emotional responses, as compared to coping processes. More specifically, people may decrease, maintain, or increase the experience of both negative and positive emotions (Gross & Thompson, 2007; John & Gross, 2007; Koole, 2009a).

This broadened view of emotion-regulation processes opened new avenues for empirical research and influenced the present dissertation, which investigated the regulation of positive emotions. In Chapter 1, an overview of emotion-regulation research will be presented, with a focus on the regulation of positive emotions. In Chapter 2, the main objective of the dissertation will be outlined.

1.2 The Role of Positive Emotions in the Emotion Regulation Research

In line with research in psychology focusing on distress and dysfunction, existing research on emotion regulation has primarily investigated how individuals regulate their negative emotions (cf. Tugade & Fredrickson, 2007). It is important to note, that existing research has been less concerned with how individuals regulate discrete negative emotions, such as anger or sadness (Rivers, Brackett, Katulak, & Salovey, 2007), and more concerned with the regulation of "clusters" of negative emotions (Koole, 2009a). Indeed, research has shown that when individuals engage in emotion regulation, their main interest is reducing the experience of negative emotions (Gross, Richards, & John, 2006). Previous studies have examined how individuals' attempts at reducing their negative emotions are related to well-being outcomes (Gross, & Muñoz, 1995; Kashdan, Barrios, Forsyth, & Steger, 2006), dispositional variables (Lischetzke & Eid, 2006), and

behavioral disorders (Aldao, Nolen-Hoeksema, & Schweizer, 2010; McLean, Miller, & Hope, 2007). Previous research has also explored how interventions can assist individuals in improving their ability to reduce negative moods and emotions (Berking, Ebert, Cuijpers, & Hofmann, 2013; Berking et al., 2008).

In contrast, there is relatively little research on the regulation of positive emotions. Positive emotions, such as enjoyment or happiness (e.g., Scherer, 2005), are not only pleasurable, by definition, but also have various personal benefits. For example, frequent experiences of positive emotions are associated with increased life-satisfaction (Diener & Ryan, 2009). In addition, positive emotions have been found to broaden individuals' attention, and to produce thoughts that are creative and flexible in nature (Fredrickson, 2001; Fredrickson & Branigan, 2005; Isen, Daubman, Nowicki, 1987). Moreover, positive emotions have also interpersonal benefits. For instance, people who express their positive emotions are typically perceived as likeable, competent, and approachable (Harker & Keltner, 2001; Reis, Wilson, Monestere, & Bernstein, 1990; Reysen, 2005; Shiota, Campos, Keltner, & Hertenstein, 2004). As such, in light of this research demonstrating the benefits of positive emotions, the question may arise as to why individuals need to regulate positive emotions at all.

1.3 Why Should Individuals Regulate Positive Emotions?

To comprehend why individuals regulate positive emotions, in the following sections, two approaches will be discussed, namely, the hedonic and the functional approaches, which represent two common views in the existing literature that clarify why individuals regulate their emotions.

1.3.1 The Hedonic Approach

Following the traditional hedonic view stating that individuals want to seek pleasure and avoid pain (see for references Erber & Erber, 2000), researchers have proposed that individuals regulate emotions and moods in accordance with this hedonic motivation (e.g., Gross, 1998b; Larsen, 2000; Tice, Bratslavsky, & Baumeister, 2001). Researchers see the strongest evidence for this widespread view in studies showing that individuals who experience negative moods engage in self-destructive behaviors in order to reduce their negative affective experience (e.g., procrastinating, overeating, see for

reviews Tice & Bratslavsky, 2000; Koole, 2009b; Koole, van Dillen, & Sheppes, 2011). In other words, individuals appear to minimize their negative emotional experiences despite potential long-term costs.

In line with the hedonic approach, researchers have further proposed that individuals not only strive to reduce negative emotions, but also aim to prolong or intensify their positive emotions (Kappas, 2011, Tugade & Fredrickson; 2007). Although direct evidence for this hypothesis is limited, supportive evidence has shown that individuals who feel happy are more likely to engage in behaviors to protect their state of happiness (e.g., Isen & Simmonds, 1978). Similarly, the hedonic contingency model (Wegener & Petty, 1994) states that individuals in a positive mood might have a narrow repertoire of behaviors or cognitions that allow them to maintain this positive mood. Accordingly, studies have shown that individuals who experience positive moods select their activities more accurately according to their pleasure-inducing characteristics, as compared to individuals who experience neutral moods (Handley, Lassiter, Nickell, & Herchenroeder, 2004; Wegener & Petty, 1994). Importantly, previous research has not only shown that individuals strive to maintain and prolong positive moods and emotions, but has also found that preserving these positive experiences leads to increased well-being and life-satisfaction (e.g., Bryant, 1989, 2003).

1.3.2 The Functional Approach

The functional approach states that individuals regulate their emotions not only due to their hedonic motivation, but also due to other motives or goals, which can be in conflict with the hedonic motivation and even overpower it (Tamir, 2009; Tamir, Chiu, & Gross, 2007). The strongest evidence for this view has shown that individuals tend to increase the experience of negative emotions in situations in which the negative experience is associated with long-term benefits. For instance, individuals may intensify their levels of anger prior to a confrontational task, or enhance their experience of fear prior to playing a threatening game, because they believe these emotions are useful to their performance (e.g., Tamir & Ford, 2009, 2012; Tamir, Mitchell, & Gross, 2008).

Moreover, according to the functional approach researchers have proposed that individuals may not only increase the experience of negative emotions, but also decrease

the experience of positive emotions in order to reach certain goals. For instance, Parrott (1993) proposed that individuals may decrease positive moods for various social reasons (e.g., to behave appropriately, to be respectful of others), and non-social reasons (e.g., to motivate oneself to work, to protect oneself against future disappointment or bad fortune). Moreover, Erber and colleagues (1996) found that individuals were more likely to decrease both their negative and positive moods when they anticipated working on tasks with strangers as compared to when they were working alone. It has been proposed that this might be because individuals want to appear "cool and collected" in the upcoming social interaction (Erber, Wegner, & Therriault, 1996). Miyamoto and Ma (2011) found that the tendency to decrease positive emotions and the underlying motivation behind this inclination varies as a function of culture. Further, Wood and colleagues (2003) have shown that individuals with low self-esteem are more likely to decrease their positive emotions as compared to those with high self-esteem. Among other reasons, this difference has been explained by individuals' differences in levels of self-protective motivation (Wood, Heimpel, & Michela, 2003).

1.3.3 The Role of the Situation in the Emotion Regulation Research

Researchers underscore that both the hedonic and functional approaches should be acknowledged to fully understand emotion-regulation processes (Gross, 1998b; Erber & Erber, 2000; Koole, 2009a; Martin, 2000). The hedonic approach describes typical emotion-regulation phenomena in everyday life, but does not adequately explain the entire phenomena. With respect to understanding why individuals need to regulate positive emotions, it appears that based on their hedonic motivation, individuals want to primarily prolong or intensify the experience of positive emotions. However, research suggests that other motives exist, which can explain why individuals may also decrease their positive emotions (Parrott 1993). Previous research has shown that these motives may vary as a function of both situational and personality factors (e.g., Erber et al., 1996; Miyamoto & Ma, 2011; Wood et al., 2003).

The role that such situational factors have in the emotion regulation processes is central to the present dissertation. Previous research has emphasized the importance of investigating the effects of contextual variables on emotion-regulation processes, rather than examining these processes independent of individuals' natural environment and

isolated from context (Campos et al., 2011; Fischer, Manstead, Evers, Timmers, & Valk, 2004; Västfjäll, & Gärling, 2006). Following the functional view and expanding this approach, situational variables are assumed to impact how individuals regulate their emotions due to situation-specific specific demands and individuals' goals and concerns in the particular situation (Campos et al., 2011). Moreover, research has shown that not only individuals' efforts to regulate their emotions, but also how helpful or useful those efforts are, can depend on the specific context (Campos et al., 2011; Tamir, 2005).

As such, drawing on this research, I investigated the effect of situational factors on how individuals regulate their positive emotions. More specifically, the effect of such situational factors was investigated on the regulation of the experience of positive emotions, but also on the expression of positive emotions (cf. Friedman & Miller-Herringer, 1991). I proposed that there are certain situations in which individuals do not strive to experience or express positive emotions, despite the benefits of the experience and expression of positive emotions demonstrated in the previous research (e.g., Fredrickson & Branigan, 2005; Reysen, 2005).

1.4 How Can Individuals Regulate Positive Emotions?

In the previous chapters, emotion regulation processes were primarily discussed in terms of how individuals influence the experience of negative and positive emotions, such as, looking at how individuals decrease, prolong or increase these emotions. However, individuals cannot only regulate the experiential component of the emotion. Moreover, individuals' efforts to regulate emotions cannot only be classified in terms of the direction in which they alter the emotion, but also in terms of more finer-graded, active efforts called emotion-regulation strategies (Koole, 2009a). For instance, according to Gross' (1998a, b) process model, emotion-regulation strategies can be classified in terms of the time points at which they have their impact in the emotion-generative process (see Chapter 1.1). More specifically, individuals can regulate an emotion before and after an emotional response has been generated, and also influence the behavioral component of the emotion (i.e. the expression of the emotion).

It is important to note that such theoretically-driven classifications of emotion-regulation strategies (e.g., Gross, 1998a, b), which identify theoretical higher-level

categories for lower-level emotion-regulation strategies, have been criticized for presenting only vague categories (Koole, 2009a). However, empirically-driven approaches which typically ask participants to report which strategies they use, followed by exploratory factor analyses to classify these reports (e.g., Parkinson & Totterdell, 1999; Thayer et al., 1994), are also criticized, for identifying a large number of the available strategies (Koole, 2009a). Indeed, given that almost any action and cognition can influence individuals' emotions, finding an appropriate classification seems to be a challenging endeavor and is best described in the literature as an "ordering problem" (Koole, 2009a, p.10). Unfortunately, the proposed classifications also vary in their categories and terminologies used to describe the same emotion-regulation strategies. Moreover, most emotion-regulation strategies proposed in the previous research address individuals' attempts to regulate negative emotions and reveal a clear overlap with existing coping strategies (e.g., relaxation, making plans for future, seeking social support; Larsen, 2000; Parkinson & Totterdell, 1999; Thayer et al., 1994). To date, relatively little research has been concerned with how individuals regulate their positive emotions.

Previous research suggests that people can maintain or increase the experience of their positive emotions, for instance, by deliberately directing attention to momentary, past and future positive experiences and events (Bryant, 2003; Feldman, Joormann, & Johnson, 2008; Quoidbach, Berry, Hansenne, & Mikolajczak, 2010), engaging in pleasure-inducing activities or thoughts (Wood et al., 2003), and sharing or celebrating positive events with other people (Langston, 1994). Further research suggests that individuals can reduce the experience of positive emotions by engaging in activities or cognitions that are detrimental to positive experiences (e.g., worries, negative thinking; Feldman et al., 2008; Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011). Moreover, individuals can reduce or inhibit the expression of positive emotions, this is, "suppress" the expression of positive emotions (Gross, 1998a; Gross & John, 2003).

In the present dissertation, to investigate the influence of situational factors on how individuals regulate their positive emotions, I first examined the suppression of positive emotions as a strategy to regulate the expression of emotions (Gross & Levenson, 1993). Secondly, I looked at individuals' attempts to prolong the experience of

their positive emotions and individuals' motivation to prolong their positive emotions as a function of situational factors. More specifically, I examined (a) the "savoring" of positive experiences which primarily as individuals' deliberate focus on the present moment and momentary positive experiences (e.g., Bryant, 2003) in the present research, and (b) individuals' motivation to engage in pleasant activities (e.g., Wood et al., 2003).

2 The Main Objective of the Dissertation

A considerable amount of research has been concerned with understanding how individuals regulate negative emotions, whereas little research attention has been drawn to the regulation of positive emotions. The overarching purpose of the present dissertation was to contribute to the existing research on the regulation of positive emotions. Previous studies have demonstrated various personal and interpersonal benefits associated with both the experience and the expression of positive emotions (Fredrickson, 2001; Harker & Keltner, 2001; Isen, Daubman, Nowicki, 1987). Moreover, further research has found that individuals typically aspire to maintain positive emotions (Tugade & Fredrickson, 2007; Wegener & Petty, 1994), and findings have also highlighted the importance of preserving these emotions for life-satisfaction (Bryant, 1989, 2003).

In the present dissertation, I hypothesized that there are situations in which individuals may not strive to experience and express positive emotions, despite the benefits related to the experience and expression of positive emotions. Previous research suggests that how individuals regulate emotions depends largely on situational factors, such as situation-specific demands and individuals' goals and concerns in the particular context (e.g., Campos et al., 2011; Tamir, 2009). Based on this research, one might assume that in certain situations individuals may not associate the experience and expression of their positive emotions with beneficial outcomes or be able to maintain and prolong their positive emotions. In the present dissertation, I aimed at investigating the impact of the situation on the regulation of the experience and the expression of positive emotions. More specifically, the effects of two situations were examined on the regulation of positive emotions in two distinct lines of research. Each of these lines of research addressed distinct hypotheses, with respect to each situation, and thus aimed to provide a unique contribution to the main research objective. These lines of research will be introduced in the next chapter (Chapter 3) and outlined in detail in Chapters 4 and 5.

3 Research Overview

3.1 Identifying the Situations

The potential situations in which individuals may not strive to experience and express their positive emotions were identified based on previous research (Friedman, & Miller-Herringer, 1991; Parrott, 1993). However, given the limited scope of this research, I additionally conducted preliminary exploratory questionnaire studies to obtain a deeper understanding of the specific situational factors. The use of this exploratory approach helped to identify two relatively prototypical situations arising in peoples' daily lives. Experimental studies were then conducted in laboratory and field settings to examine the effects of these situational factors on the regulation of positive emotions with positive emotions caused by attaining a successful performance outcome. In the first line of research, I investigated the suppression of positive emotions in a social situation in which a person has achieved a better performance than others (i.e., outperformance situation; Exline & Lobel, 1999). In the second line of research, the savoring of the momentary positive experience and the desire to engage in a pleasant experience following successful performance were examined in a situation in which a person has not yet completed a task.

3.2 First Line of Research: The Regulation of Positive Emotions in Social Situations

Despite evidence showing individuals to regulate their emotions most frequently in social settings (Gross et al., 2006), relatively little consideration has been given to emotion regulation in social situations. Most studies investigating suppression of the expression of emotions in these situations have focused on the suppression of negative emotions and have overlooked the effects of specific situational variables (e.g., Butler et al., 2003; Egloff, Schmukle, Burns, & Schwerdtfeger, 2006; English & John, 2013; Srivastava, Tamir, McGonigal, John, & Gross, 2009). However, how individuals manage emotion displays in social settings has received a lot of research attention prior to research on emotion regulation. Emotion displays convey important information about the person's inner feelings, behavioral intentions and the nature of their relationship with others (Kraut, & Johnston, 1979). Influential work was conducted by Ekman and Friesen (1969, 1974; see also Ekman, 1993; Ekman, Friesen, & Ellsworth, 1972), who proposed

the existence of social rules which influence individuals' emotion displays in social contexts. To date, only two studies exist which have examined the suppression of positive emotions in social settings (Friedman & Miller-Herringer, 1991; Kalokerinos, Greenaway, Pedder, & Margetts, 2014). The first line of research expands upon this research by investigating the suppression of positive emotions in a social situation in which a person has achieved a better performance than others, this is, an outperformance situation. [1]

Hypothesis Ia: The first hypothesis stated that individuals would suppress positive emotions in outperformance situations more than in non-outperformance situations. It was assumed that in outperformance situations, individuals may suppress positive emotions to not appear boastful or inconsiderate in the presence of poor-performing others.

Hypothesis Ib: Moreover, it was proposed that suppression of positive emotions in outperformance situations may be positively evaluated by others. Thus, second hypothesis stated that suppression of positive emotions would lead to more positive evaluations of a person than the expression of positive emotions, specifically in outperformance situations as compared to non-outperformance situations.

Four studies were conducted to test these predictions including three main studies and one preliminary study, which are outlined in Chapter 4.

3.3 Second Line of Research: The Regulation of Positive Emotions in Achievement Situations

To date, a great deal of research has focused on how individuals deal with the experience of negative emotions following setbacks, whereas surprisingly little is known about how individuals handle positive emotions following successful performances (e.g., Folkman & Lazarus, 1985; Neff, Ya-Ping, & Dejitterat, 2005; Schutz, Distefano, Benson, & Davis, 2004). Previous research has underscored the importance to maintain positive emotional experiences following positive events with respect to life satisfaction and well-

[1] Although the study conducted by Kalokerinos et al. (2014) has addressed a similar research topic this study and the present study had been conducted independent from each other.

being (Bryant 1989, 2003). Individuals may maintain their positive emotional experiences, for example, by savoring these experiences (Bryant, 2003) or by engaging in pleasant experiences, such as pleasant thoughts and activities (Wood et al., 2003). In the second line of research, it was investigated whether savoring and the desire to engage in a pleasant experience following a successful performance would depend on whether a task was completed or not. Thus, it was proposed that although success results in positive emotional experiences, whether individuals indulge in their positive emotions following may depend on the performance situation.

Hypothesis IIa: More specifically, it was first assumed that when a task is not yet complete, individuals are more likely to focus on task completion rather than savor their positive experiences. Thus, the first hypothesis stated that individuals would be less likely to savor their momentary positive experience following successful performance, when a task was in progress as compared to complete.

Hypothesis IIb: Moreover, it was further assumed that individuals may also refrain from engaging in a pleasant experience after successful performance due to their focus on task completion. It was secondly hypothesized that individuals would express a lower desire to engage in pleasant experiences following a successful performance, when the task was in progress as compared to complete.

Three experimental studies were conducted to investigate the hypotheses. Given that the evidence was not consistent across two of these studies, results will be presented in two separate chapters (Chapters 5.1 and 5.2), and be integrated in Chapter 5.3.

4 First Line of Research

"Smiling on the Inside: The Social Benefits of Suppressing Positive Emotions in Outperformance Situations"

4.1 Summary

Although expressing positive emotions is typically socially rewarded, under specific circumstances suppressing them might be beneficial. In the present work we tested the hypotheses that people suppress positive emotions and, in turn, experience social benefits from this suppression in situations in which outperformed others are present. We tested these predictions in three experimental studies with high-school students. In Study 1 (N = 33) and Study 2 (N = 53), we manipulated the type of social situation (outperformance vs. non-outperformance) and assessed suppression of the expression of positive emotions with Study 1 situated in a real-life outperformance situation and Study 2 having participants recall an outperformance event. In both studies, the suppression of positive emotions was found to be stronger in outperformance as compared to non-outperformance situations. In Study 3 (N = 195), we evaluated the social effects of positive emotion suppression by manipulating the social situation (outperformance vs. non-outperformance) and a videotaped person's expression of positive emotions (suppression vs. expression). The findings showed that when outperforming others, individuals suppressing the expression of their positive emotions are indeed evaluated more positively as compared to individuals expressing their positive emotions and demonstrate the importance of the specific social situation with respect to the effects of positive emotion suppression.

4.2 Introduction

Over the past few decades, psychology research has consistently found experiencing positive affect to be critical to psychological well-being. Previous research has shown positive emotions to activate individuals' intellectual and physical resources (Fredrickson, 1998; 2005; Fredrickson et al., 2013) as well as positively predict health (Pressman & Cohen, 2005; Steptoe, O'Donnell, Marmot, & Wardle, 2008) and

productivity (Lucas & Diener, 2001; Oswald, Proto, & Sgroi, 2009; Warr, 2007). Further, research has shown numerous positive consequences of not only experiencing but also expressing positive emotions. Expressing positive emotions plays an important role in individuals' social lives, with research showing individuals to express positive emotions in order to communicate friendliness and a motivation to establish close relationships (Kraut & Johnson, 1979). Studies have found that individuals who express positive emotions are perceived as more likable (Reysen, 2005), more sociable (Reis, Wilson, Monestere, & Bernstein, 1990), and more approachable (Harker & Keltner, 2001) as compared to others who are less inclined to express their positive emotions.

Despite the preponderance of evidence in favor of expressing positive emotions, we propose that these positive social effects cannot be generalized across all social situations. For example, although getting a good grade at school is usually highly important for a student and therefore will often lead to positive emotions, expressing one's elation around classmates who may have performed worse might not be considered appropriate. In such a social situation experienced in everyday life (i.e., an "outperformance situation," Exline & Lobel, 1999), suppressing positive emotions, that is, inhibiting of the expression of these emotions (Gross & Levenson, 1993), can be more socially beneficial compared to expressing positive emotions. In the present research, we investigated the role of the specific social situation with respect to the suppression of positive emotions. More specifically, we first investigated whether individuals are more likely to suppress positive emotions in social situations in which one is noticeably more successful than others, as compared to when among similarly successful peers. We subsequently evaluated the social effects of suppression and expression of positive emotions in outperformance as compared to non-outperformance situations. Based on the assumption that outperformance situations occur on a regular basis in educational and professional settings, the present research outlines findings from multiple experimental studies examining the suppression of positive emotions among high school students in everyday classroom settings.

4.3 Expressing and Suppressing Positive Emotions: The Role of Outperformance Situations

Suppression is defined as an emotion-regulation strategy that modulates the behavioral or the expressive component of an emotional response after the emotion has been elicited (Gross, 1998; Gross & Levenson, 1993). According to Gross' (1998) process model of emotion regulation, suppression does not target the experience component of the emotion. Suppression, and in particular the suppression of negative emotions represents a commonly used emotion-regulation strategy in social life (cf. Gross, Richards, & John, 2006). Accordingly, most research has focused primarily on the suppression of these negative emotions in social situations and has shown this strategy to have consistently negative social consequences (e.g., Butler et al., 2003; Richards, Butler, & Gross, 2003). In contrast, limited empirical work to date has addressed the suppression of the expression of positive emotions. In one experiment (Friedman & Miller-Herringer, 1991), participants who received performance feedback that was better than that of their peers demonstrated lesser expression of positive emotions concerning this feedback in the presence of others as compared to in private. Recent research further showed participants to evaluate winners who expressed positive emotions less positively than winners who did not express positive emotions, or were believed to suppress these emotions (Kalokerinos, Greenaway, Pedder, & Margetts, 2014). Although both studies suggest that individuals perceive the expression of positive emotions after success as socially inappropriate in the presence of others they do not explicitly address the underlying assumption that this suppression should be most evident and socially advantageous in social situations in which one has outperformed others.

Indeed, scattered findings support the assumption that outperforming others can represent a specific situational characteristic leading to the suppression of positive emotions (for a review, see Exline & Lobel, 1999). For instance, studies show outperformers—despite of and independent of their subjective positive feelings—to be concerned about potential upset or envy in those who performed worse, as well as being rejected or ostracized (Exline & Lobel, 2001; Exline, Single, Lobel, & Geyer, 2004; Koch & Metcalfe, 2011; Rodriguez Mosquera, Parrott, & Hurtado de Mendoza, 2010). In order to avoid negative social reactions, outperformers are further hypothesized to

engage in strategies that help them minimize their performance and downplay their success (Exline et al., 2004). Suppressing positive emotions can thus represent a type of socially prescribed strategy that is motivated by outperformers' concerns for others' emotions and humility (Ekman, 1971; Ekman, Friesen, & Ellsworth, 1972; Friedman & Miller-Herringer, 1991).

Importantly, empirical evidence exists that the concerns of outperformers, with respect to being evaluated negatively by others, are legitimate. Earlier work has shown individuals to perceive someone who performed better than themselves as less likeable, and also experience stronger feelings of jealousy and envy toward this person, in comparison to someone who performed worse than themselves (e.g., Salovey & Rodin, 1984; Smith, Diener, & Garonzik, 1990). These negative attitudes appear to be intensified when the outperformer emphasizes their success. For instance, studies have shown people to evaluate self-enhancing or immodest persons as less friendly, authentic, and likable as compared to self-deprecating or modest individuals (Powers & Zuroff, 1988; Robinson, Johnson, & Shields, 1995).

Thus, in the present research we aimed to test the assumption such that individuals in social situations in which they outperform others should be more likely to suppress positive emotions than individuals in social situations in which others are not being outperformed. We further tested the assumption that individuals who express positive emotions in outperformance situations, as compared to situations that do not involve outperforming others, should have negative consequences, whereas suppressing positive emotions should be perceived as considerate and mitigate the negative social consequences of success. The suppression of positive emotions in outperformance as compared to non-outperformance situations was examined among high-school students. Investigating how students regulate their positive emotions, such as, when they are excited about a good grade, was considered to be particularly relevant to this population as these responses may be critical for establishing friendships and social acceptance.

4.4 The Present Research

In summary, in the present research we investigated the extent of individuals' suppression of positive emotions and the social benefits thereof as compared to their

expression in an effort to expand upon limited existing research addressing this research question (Friedman & Miller-Herringer, 1991; Kalokerinos et al., 2014). First, we tested if the effects of suppression and expression were influenced by the nature of the social situation (e.g., Exline & Lobel, 1999) by evaluating whether the performance level of others indeed caused people to suppress the expression of their positive emotions after success. Second, we explored this phenomenon in everyday-life social situations in three experimental studies examining the responses of high-school students to achievement outcomes. More specifically, in Studies 1 and 2, we tested the prediction that individuals in outperformance situations would suppress positive emotions more than individuals in non-outperformance situations. In Study 1, we tested this hypothesis in the field (i.e., classroom) by assessing students' emotions at the moment they received an actual good grade from their teacher. In a repeated-measures design, we compared the extent of the real-time reported suppression of these positive emotions following success with respect to their classmates (outperformance situation) with the extent of the reported suppression with respect to anticipated interactions with their parents (non-outperformance situation). In Study 2, we asked students in a between-participants design to recall an autobiographical situation (outperformance vs. non-outperformance) and to report the extent of suppression in this situation. In both studies, we additionally examined the processes underlying this effect in an effort to explore students' motivation underlying the suppression. In Study 3, we tested the prediction that the suppression of positive emotions would lead to a more favorable evaluation of an individual than the expression of these emotions, specifically in outperformance situations as compared to non-outperformance situations. More specifically, this final experimental study gauged participants' responses to a manipulated video depiction of emotion expression (suppression vs. expression) of a target student during an interaction with peers who were described as performing more poorly or similar to the student (outperformance vs. non-outperformance).

4.5 Study 1

In Study 1, we evaluated a real-life achievement setting in which students experienced positive emotions upon being informed of a good grade on a test from their teacher. We asked students to report the extent of the suppression these positive emotions

in the given real-life classroom situation and predicted that students would report greater suppression with respect to their classmates at that time than in an anticipated social situation involving their parents. We chose these situations for two reasons: First, both social situations (being with classmates or with parents) represent highly typical social situations in the everyday lives of high-school students. Second, previous research suggests that performance comparisons are more likely to occur with peers (Lubbers, Kuyper, & Van der Werf, 2009) than with parents. Instead, parents are typically supportive of their child's achievements (Baker & Stevenson, 1986) and likely to view their child's performance as partly due to their academic involvement (Hannawa & Spitzberg, 2009; Tesser, 1980). An initial pretest was conducted to test the hypothesis that being with classmates would be perceived as more of an outperformance situation as compared to being with parents. In detail, the pretest asked students (N = 17; M_{age} = 15.76, SD_{age} = 1.98) to think of a situation in which they had performed well on a test and to report the extent to which they believed this grade to indicate to their "classmates/parents/friends/siblings" that they were more successful than these individuals (1 = *not at all*, 7 = *very much*). Indeed, students reported stronger beliefs that their grade would indicate their outperformance more to their classmates than their parents, $t(16) = 2.28$, $p = .037$ (but not compared to siblings or friends, $ps \geq .11$). Given these confirmatory pretest results, Study 1 was conducted in which the outperformance situation was operationalized as a social situation involving students' classmates and the non-outperformance situation was operationalized as a social situation involving students' parents.

4.5.1 Method

Participants and Design

An initial sample of 68 students from two 10th-grade classes and one 11th-grade class from the highest track of the German school system (i.e., Gymnasium, approximately one third of the total student cohort; Federal Statistical Office, 2013) participated in the experiment. From the initial sample, data from a subsample of 32 participants (M_{age} = 16.63, SD_{age} = 0.75; 21 female) who reported positive emotions about their good grade on a test were retained for subsequent analyses (for rationale concerning the selection procedure, see Results section). A single-factor, within-

participants design was employed in this study, with situation (outperformance vs. non-outperformance) as the repeated-measures factor and suppression of the expression of positive emotions as the dependent variable.

Procedure

The study was conducted in the classroom setting during regularly scheduled lessons on the topic of politics that were taught by the same teacher. To minimize researcher intrusion into the naturalistic classroom setting, all study materials were distributed by the teacher during the lessons. At the beginning of the lesson, the teacher informed students of the study and its aim to investigate students' emotions. During the lesson, the teacher provided students a graded copy of a previously completed test on which their grade was indicated, as well as the study questionnaire. The six-page questionnaire booklets were identical for all participants. To underscore the confidentiality of the responses, the questionnaires were returned to the teacher in sealed envelopes.

After receiving the grade from the teacher, participants were provided 3-5 min during which they could check their grade, review their test, and talk to their classmates so as to ensure a typical classroom setting. Participants were then instructed to complete the questionnaire. In a first step, they reported their momentary emotions about their grade on the test. They were then asked to think about the situation at hand, namely to focus on being in class and talking to their classmates about their grades, after which they were asked to report the suppression of the expression of their emotions at that time as well as reasons for this suppression (outperformance condition). Participants were subsequently presented with the following instructions: "Now imagine that you are going home after school today and are meeting your parents. Imagine that you are talking about the grade you have just received on the test with your parents." Participants were then asked to report the extent to which they would suppress the expression of their momentary emotions concerning the grade in that anticipated situation (non-outperformance condition). Finally, participants reported the specific grade they received on the test and answered demographic questions (e.g., gender, age, class, language skills, nationality). Participants were provided 10 min to complete the questionnaire and received a chocolate bar for their participation.

Measures

Emotions. A single-item, 7-point measure adapted from Andrews and Withey's (1976) single-item Affect Evaluation Scale asked participants to report their feelings concerning their grade at the moment (1 = *negative feelings*, 4 = *neutral*, 7 = *positive feelings*). We additionally used four items from the Geneva Emotion Wheel (Scherer, 2005; Scherer, Shuman, Fontaine, & Soriano, 2013) to assess the intensity of positive emotions ("contentment," "enjoyment," "pride," "relief"). Participants were asked to rate the extent to which they experienced these emotions about their grade in that situation (1 = *not at all*, 7 = *extremely*). The average score was evaluated as a composite of positive emotions ($\alpha = .92$).

Suppression. We assessed suppression of the expression of participants' momentary grade-related emotions using modified versions of the four-item, 7-point suppression subscale of the Emotion Regulation Questionnaire (Gross & John, 2003). In its original version, the scale assesses individuals' habitual use of suppression but can be also used to evaluate suppression at that moment (e.g., Netzlek & Kuppens, 2008; Srivastava, Tamir, McGonigal, John, & Gross, 2009). For our study, the scale was adapted by rewording the items to refer to participants' suppression of emotions concerning their grade. In the outperformance condition, participants were asked to report the extent to which they disagreed or agreed that they controlled the expression of their feelings concerning their grade in the momentary social situation involving their classmates (e.g., "I control my feelings about the grade by not expressing them" (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .90$). In the non-outperformance condition, scale items were phrased in the future tense to refer to the anticipated social situation involving their parents (e.g., "I will control my feelings about the grade by not expressing them" [$\alpha = .88$]).

Reasons for suppression in the outperformance situation. In addition, to obtain greater insight into participants' reasons for suppressing their positive emotions, participants in the outperformance condition were asked to briefly write their reasons *why* they controlled the expression of their emotions if they did so after receiving their grade.

Test grade. A single item asked participants to report the grade they received on the test on the typical German grading scale that ranges from 1 (*very good*) to 6 (*insufficient*). To have grades be interpreted in a more intuitive manner, the values were inverted such that higher values indicated better performance.

4.5.2 Results

Participant Selection: Test Grade and Positive Emotions

We selected the data for subsequent analyses based on two criteria: First, we selected participants with grades above the midpoint (3 = *sufficient*) of the inverted 6-point grading scale (1 = *insufficient*, 6 = *very good*) to assess students whose performance was evaluated objectively as "sufficient" or higher by the teacher. Second, we selected only those participants who reported scores above the midpoint (4 = *neutral*) of the one-item, 7-point scale of emotion valence ranging from 1 (*negative feelings*) to 7 (*positive feelings*) resulting in a final sample of 32 participants. An additional between-groups *t*-test with Levene's correction showed that these 32 participants received, on average, significantly better grades relative to their peers (*M*s = 4.97 vs. 3.65), $t(54.06) = 6.65$, $p < .001$. With respect to the intensity of experienced positive emotions, a *t*-test confirmed that these participants also reported significantly more intense positive emotions specific to their good grade (*M*s = 5.26 vs. 2.93), $t(64) = 7.60$, $p < .001$.

Suppression of Positive Emotions

We first conducted an analysis of variance (ANOVA) on suppression with situation as the repeated-measures factor and gender as a predictor to test for gender differences. As the analysis yielded no significant effects of gender or interaction with gender, *p*s ≥ .14, gender was excluded from subsequent analyses. According to our hypothesis, we expected that participants who experienced positive emotions upon receipt of good grades would report significantly more suppression in the presence of their classmates (outperformance condition) as compared to an anticipated situation with parents (non-outperformance condition). An ANOVA on suppression yielded a significant effect of the situation, $F(1, 31) = 4.80$, $p = .036$, $\eta_p^2 = .13$, with participants who experienced positive emotions about their good grade reporting significantly higher

suppression ratings in the outperformance condition (M = 2.36, SD = 1.25) than in non-outperformance condition (M = 1.87, SD = 1.60).

Reasons for Suppression in the Outperformance Situation

Of the participants who experienced positive emotions concerning their grade, 10 participants additionally reported reasons for the suppression of these emotions in the outperformance situation. Two independent coders identified two categories of reasons (interrater agreement: κ = .93). Nine participants suppressed their emotions for social reasons, such as to avoid negative responses from others ("I don't want to discourage other students who received a worse grade.") or to protect themselves from potential negative reactions ("I suppress my feelings to prevent being offended by others.").

4.5.3 Discussion

In Study 1, we found evidence in support of our hypothesis that individuals suppress positive emotions in outperformance situations more than in non-outperformance situations. More precisely, our results showed that students who experienced positive emotions concerning successful test performance reported more suppression of these emotions in a real-time social situation involving their classmates than in an anticipated social situation involving their parents. These findings further suggest that students may have suppressed their positive emotions in class because they believed this strategy might help to maintain both their positive affect concerning their performance with being accepted by peers. In sum, the present field study provides empirical support for positive emotion suppression in an ecologically valid, real-life school setting with respect to two highly typical social situations encountered by high-school students involving performance feedback. However, we cannot rule out that the observed difference in the suppression of positive emotions may have been at least partly due to methodological differences between the outperformance and non-outperformance conditions (e.g., real-time vs. prospective reports, order effects). Further, despite the benefits of testing our hypotheses in a field setting and everyday situations, we cannot rule out the influence of other socially-relevant differences between the experimental conditions such as, social support, closeness, etc., beyond the outperformance

manipulation of interest. Study 2 was therefore conducted to address these limitations by utilizing a consistent method of assessment in a between-participants design.

4.6 Study 2

In Study 2, we aimed to replicate the results of Study 1 showing that individuals are more likely to suppress positive emotions in outperformance situations than in non-outperformance situations. More specifically, we used consistent assessment methods in a between-participants design and manipulated only the performance level of other individuals to provide a more conservative test of our hypothesis (e.g., Exline & Lobel, 1999). As such, whereas in the outperformance situation there was a discrepancy in performance between individuals, there was no such discrepancy in the non-outperformance situation. Students' responses to social situations experienced in everyday life were evaluated by asking students in an outperformance or non-outperformance condition to recall an autobiographical situation and report the amount of suppression in that situation. To assess the generalizability of findings from Study 1 to other achievement domains, students were asked to recall a situation from any achievement domain. Based on the preliminary findings of Study 1, we further examined whether the extent of suppression of positive emotions in outperformance situations was mediated by the motivation to avoid negative social reactions by others.

4.6.1 Method

Participants and Design

Fifty-eight students from one 10th-grade class and two 11th-grade classes from the highest track of the German school system (Gymnasium) participated in the study. From this sample, data from five participants who did not follow the experimental instructions were removed prior to analyses.[2] The final sample included 53 participants (M_{age} = 17.69, SD_{age} = 1.09; 30 female). We used a between-participants design to evaluate the effect of the situation (outperformance vs. non-outperformance) on

[2] One participant did not provide any description of the situation and was removed to prevent responses based on incorrect situational perceptions. Four additional participants were removed because they described situations in which they performed, but did not specify the performance of present others.

suppression of positive emotion expression with participants randomly assigned to one of the two conditions (*n*s = 28 vs. 25).

Procedure

The experiment was conducted in classrooms either before or after a regular lesson and was introduced by teachers as a research study on students' emotions. After informing participants of the confidentiality of their responses, they completed a 15-minute questionnaire corresponding to one of two experimental conditions (outperformance vs. non-outperformance). The six-page booklets were identical for all participants with the exception of the manipulated instructions on the first page prompting them to recall a social situation from their past in which they had outperformed others, or did not outperform others who were present. Participants were asked to provide a detailed written description of the recalled situation, and then to indicate the extent to which they felt positively about the situation, the suppression of the expression of these emotions, and their motivation for this suppression. Finally, participants completed demographic items (e.g., gender, age, class, language skills, nationality), after which they were thanked and provided a chocolate bar in exchange for their participation.

Manipulation of Social Situation (Outperformance vs. Non-Outperformance Condition)

Participants were instructed to recall a situation in which they were successful and had associated this performance with very positive feelings. Examples of positive emotions that participants might have experienced in the recalled situation were provided (e.g., enjoyment, pride). In the outperformance condition, participants received additional information instructing them to recall a success situation in which "other people were present who had performed more poorly in the same achievement domain." In the non-outperformance condition, participants were instead instructed to recall a success situation in which "other people were present who had also performed well in the same achievement domain."

Measures

Positive emotions. Similar to Study 1, four items were used to assess positive emotions of "contentment," "enjoyment," "pride," and "relief" (Scherer, 2005; Scherer et al., 2013). Participants were asked to rate the extent to which they experienced these emotions about their performance in the recalled situation (1 = *not at all*, 7 = *extremely*; α = .76).

Suppression. Similar to Study 1, we assessed the suppression of performance-related emotions using a four-item, 7-point measure from Gross and John (2003). Participants were asked to report the extent to what they disagreed or agreed that they controlled the expression of their feelings about their performance in the recalled situation (e.g., "I controlled my feelings by not expressing them"; 1 = *strongly disagree*, 7 = *strongly agree*; α = .92).

Motivation to avoid negative social reactions. Based on participants' open-ended responses from Study 1, we created four 7-point items to assess motivation to avoid negative social reactions to expressions of positive emotions following success. Participants were asked to recollect if they had reported controlling the expression of positive feelings about their performance in the previously recalled situation, and to what extent they did so "to not be perceived as arrogant," "to not be perceived as boastful," "to not hurt the feelings of others," and "to not make others feel upset" (1 = *strongly disagree*, 7 = *strongly agree*; α = .88).

Coding of the Recalled Situations

To evaluate the efficacy of our experimental manipulation, the content of the recalled situations was coded by two independent coders who were blind to the experimental conditions. First, the coders identified the types of achievement domains indicated in the recalled situations. Second, the coders rated the degree of success reflected in participants' reported performance and that of others in the achievement setting (1 = *very poor performance*, 7 = *very good performance*). The interrater

agreement was high for type of the achievement domain (κ = .89), the participants' performance level (r = .81), and the performance level of others (r = .95).[3]

4.6.2 Results

Manipulation Checks: Positive Emotions and Coding

The situations reported by participants reflected different achievement domains including 42% from the academic domain (e.g., receiving grades at school), 30% from the sports domain (e.g., an athletic competition), and 28% from other domains (e.g., taking a driver's license exam). Similarly to the selection criteria used in Study 1, we initially tested whether participants in both experimental conditions recalled situations in which they had experienced positive emotions concerning their success. Descriptive analyses showed coders' ratings of participants' performance outcome (M = 5.96, SD = 0.65, 7-point scale) to range from 5 (e.g., winning a table football game) to 7 (e.g., passing a driver's license). Participants' ratings of the intensity of corresponding positive emotions (M = 6.17, SD = 0.88, 7-point scale) ranged from 3 to 7. An additional regression analysis showed the coded reported performance level to positively predict the intensity of positive emotions, β = .35, SE = .17, p = .047. Separate ANOVAs on participants' ratings of their performance level and intensity of positive emotions showed these outcomes to not significantly differ between the outperformance and non-outperformance conditions, ps ≥ .81. In sum, these results suggest that in both experimental conditions, participants recalled situations in which they had performed well and experienced positive emotions about their performance.

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[3] To explore whether closeness to other persons might be associated with the extent of suppression of positive emotions, coders rated the degree of the closeness based on participants' responses using the "Inclusion of Other in the Self" pictorial scale (Aron, Aron, & Smollan, 1992). This scale is a single-item measure ranging from (Figure 1) *very distant relationship* to (Figure 7) *very close relationship*. The interrater agreement was satisfactory, r = .83. Results of a regression analysis revealed no significant association between closeness and suppression (neither in the outperformance condition nor in the non-outperformance condition, ps ≥ .29). An additional hierarchical multiple regression analysis showed no significant effect of the two-way interaction of situation manipulation and closeness, p = .45, on suppression. Social closeness was neither a predictor nor a moderator of suppression.

In a further step, we tested whether participants recalled situations in which others who were present had performed more poorly than themselves (outperformance condition) or similarly well (non-outperformance condition) in the same domain. An ANOVA on the others' performance level, as rated by the coders, showed a significant effect of the situation, $F(1, 47) = 152.66$, $p < .001$, $\eta_p^2 = .76$, with a poorer-performing others being more frequently reported by participants in the outperformance condition ($M = 2.27$, $SD = 1.19$) as compared to the non-outperformance condition ($M = 5.84$, $SD = 0.71$). A typical situation reported in the outperformance condition was: "I was very happy about my good grade in the exam, but my friend failed and was disappointed." A typical situation reported in the non-outperformance condition was: "We wrote a difficult test, and both my friend and I received good grades." Taken together, these preliminary results suggest that our experimental instructions were successful.

Suppression of Positive Emotions

We first conducted an ANOVA on suppression with situation and gender as between-participants factors to test for gender differences. As the analysis revealed no significant effects of gender or an interaction with gender, $ps \geq .29$, gender was excluded from subsequent analyses. Results of the one-way ANOVA were consistent with our hypothesis in showing a significant effect of the situation type on suppression, $F(1, 50) = 8.90$, $p = .004$, $\eta_p^2 = .15$, with participants reporting significantly higher suppression levels in the outperformance condition ($M = 3.31$, $SD = 1.85$) than participants in the non-outperformance condition ($M = 2.01$, $SD = 1.06$).

Motivation to Avoid Negative Social Responses

We further expected that participants' motivation to avoid negative social responses by suppressing of positive emotions would mediate the influence of the achievement situation on the extent of their suppression. A mediational regression analysis using a bootstrapping method based on 5000 resamples (Hayes, 2009) showed a significant effect of the situation on motivation, $\beta = 1.62$, $SE = .52$, $p = .003$, with higher motivation levels being observed in the outperformance condition ($M = 4.28$, $SD = 1.86$) than in the non-outperformance condition ($M = 2.65$, $SD = 1.66$). This motivation was, in turn, positively related to suppression, $\beta = 0.29$, $SE = .12$, $p = .022$, with the anticipated

indirect effect of the situation on suppression through motivation achieving significance (as per a 95% bias-corrected confidence intervals not including zero; β = 0.47, *SE* = .32, *CI* = [0.05, 1.36]). Finally, a regression analysis including both situation type and motivation as predictors of suppression showed the effect of the situation to achieve only marginal significance, β = 0.88, *SE* = .47, *p* = .069, providing evidence in support of motivation levels as a partial mediator of the effect of situation type on positive emotion suppression.

4.6.3 Discussion

The findings from Study 2 replicate the results of Study 1 and provide further evidence in support of the hypothesis that individuals are more likely to suppress positive emotions in outperformance situations as compared to non-outperformance situations. In this study, students reported being more likely to suppress their positive emotions after achieving success in a situation in which others had performed more poorly than in a situation in which others had performed equally well. We further hypothesized that this suppression of positive emotions may be more evident in outperformance situations because of the motivation to avoid negative social reactions. In contrast, participants in non-outperformance situations were expected to be more willing to express their positive emotions due to the presence of others who performed similarly and would not perceive such expression as discouraging. Indeed, our findings support this explanation in showing the extent of positive emotion suppression observed in outperformance situations to be significantly mediated by the motivation to avoid negative social reactions to appearing boastful or hurting others' feelings. Thus, these findings are similar to Study 1 in suggesting that individuals suppress the positive emotion expression because they believe that suppressing positive emotions in the presence of worse-off others will be relatively more socially rewarding. Given this consistent evidence from Studies 1 and 2, Study 3 was conducted to further examine whether the suppression of positive emotions would indeed be more socially appropriate in outperformance situations compared to non-outperformance situations.

4.7 Study 3: Overview and Preliminary Study

In Study 3, we tested the hypothesis that suppressing positive emotions would be more positively evaluated than expressing these emotions in an outperformance situation, but not in a non-outperformance situation. This study utilized an adapted observer-based paradigm (cf. Chaikin & Derlega, 1974) to provide an objective evaluation of a target individual during a social situation in which others were present and to more clearly operationalize suppression and expression with respect to nonverbal behavior. In detail, participants first read a scenario in which the social situation was manipulated (outperformance vs. non-outperformance; we used a situation described by participants in Study 2), viewed a video scene in which the emotion expression of a target student was manipulated (suppression vs. expression), and then reported the likability as well as acceptance of the target student. To avoid possible opposite-gender effects, we matched the gender of the target and participant, with the same male or female target student presented across conditions to rule out possible effects of personal attributes. We further conducted a preliminary study to test whether the manipulation of emotion expression in the video scenes was effective.

4.7.1 Video Manipulation

To manipulate the expression of emotion in target students, video scenes were developed for this study in which the suppression or expression of positive emotions was depicted. The videos focused on the expression and suppression specifically of feelings of enjoyment, an important positive achievement-related emotion shown to facilitate learning, achievement, and well-being in educational settings (e.g., Goetz, Hall, Frenzel, & Pekrun, 2006). Although the emotion of pride represents a related positive emotional experience following success, this emotion was not evaluated due to possible negative connotations (cf. resulting from the “hubristic” component stemming from an inflated self-view; Tracy & Robins, 2007), thus potentially confounding the influence of the expression manipulation on target student’s evaluation. Of an initial set of 14 videos developed for this study, four videos were selected (one per condition for each gender; one target student per gender) based on two experts’ evaluations of the effectiveness of the expression displays.

More specifically, in this preliminary study we (a) tested whether the target student expressed less positive emotions in the suppression than in the expression condition, (b) whether enjoyment was indeed the emotion that best differentiated between these conditions and, (c) whether the displayed emotion was correctly perceived as indicating suppression as opposed to simply a lack of expression. Previous studies have shown that participants who were instructed to suppress a positive emotion showed not only a decreased expression of this emotion but also additional behavioral cues or even negative emotions that can be interpreted as conscious regulatory efforts to suppress the positive emotion (e.g., Gross & Levenson, 1997; Mehrabian, 1971).

4.7.2 Participants and Procedure

Sixty-nine students (10th and 11th grades, M_{age} = 16.86 years, SD_{age} = 1.14; 36 female) participated in a web-based study on emotions. Each participant was randomly assigned to watch one of four video scenes demonstrating suppression or expression of positive emotions by a male or female target student (16 and 17 years of age, respectively). Participants were informed that the videos would be presented without sound. In the suppression condition, participants viewed a video in which the target student was instructed to talk to two other students about an autobiographical event in which s/he performed well and enjoyed this success while suppressing enjoyment. In the expression condition, participants watched a video in which the target student was instructed to talk about this event to two other students while fully expressing enjoyment.

In detail, the target student was asked to recall an autobiographical success experience that s/he associated with enjoyment and would be comfortable discussing with two other students while being videotaped. The target student was instructed to talk to two other students about this event while either suppressing enjoyment or fully expressing enjoyment. Examples were given to specify each target behavior (e.g., in the suppression condition: “lack of positive face expressions,” “less eye contact”; in the expression condition: “smiling,” “widely opened eyes”). These examples were derived from an additional preceding interview study (N = 13) in which high-school students were asked to report how they recognized the expression and suppression of enjoyment in other students.

The video scenes presented the target student with their face to the camera and visible to participants, with the two other students facing the target student having the backs of their heads facing the camera. The position and distance of the target and other students to the camera was held constant across the suppression and expression conditions. After watching the video for 50 s, participants were asked to report the extent of positive and negative emotions expressed by the target student as well as target students' behavioral characteristics.

Expressed Emotions and Behavior Cues

Three items were used to assess positive emotions, namely the emotions of "contentment," "enjoyment," and "relief" and were summed to provide a composite positive emotion variable for analysis (α = .85). Four negative emotion items assessing "anger," "anxiety," "guilt," and "sadness" were combined to create a composite negative emotion measure (α = .89). All emotion items were selected based on the Geneva Emotion Wheel (Scherer, 2005; Scherer et al., 2013). In addition, the authentic component of pride (e.g., accomplished; [α = .90]) and the hubristic component of pride (e.g., arrogant; [α = .90]) were assessed using two 7-item, 7-point scales derived from Tracy and Robins (2007). Participants were asked to indicate the extent to which these emotions were expressed by the target student (1 = *not at all*, 7 = *very much so*). The behavioral cues displayed by the target student were assessed with an open-ended response item asking participants to describe the specific characteristics of the target student (e.g., face, posture) that helped them recognize the expressed emotions.

4.7.3 Results

We first computed a multivariate analysis of variance (MANOVA) on positive emotions, authentic pride, and hubristic pride with the expression manipulation and target student's gender as between-participants factors. The analysis revealed a non-significant effect of gender and a significant effect of the manipulation, $F(3, 54) = 23.52$, $p < .001$. Follow-up ANOVAs showed that the effect of the expression manipulation was significant for positive emotions, $F(1, 56) = 69.24$, $p < .001$, and authentic pride, $F(1, 56) = 31.90$, $p < .001$, with the target student being perceived as expressing significantly less positive emotions and authentic pride in the suppression condition than in the expression

condition. Means and standard deviations for the perceived emotions as expressed by the target student are presented in *Table 1.1*. There was no significant effect of the manipulation on hubristic pride, p = .85, suggesting that this potential negative evaluation of pride did not differ between the expression and suppression conditions.

Table 1.1: Descriptive Statistics from the Preliminary Study (N = 69) Including Group Means and Standard Deviations in Parentheses for Positive Emotions and Negative Emotions Expressed by the Target Student (Female and Male) in the Suppression versus Expression Conditions

	Suppression			Expression		
	Target	Female	Male	Target	Female	Male
Positive emotions	2.35 (1.20)	1.98 (1.08)	2.94 (1.18)	5.13 (1.39)	5.67 (0.71)	4.80 (1.60)
Negative emotions	3.48 (1.58)	3.95 (1.42)	2.69 (1.58)	1.33 (0.66)	1.06 (0.16)	1.49 (0.78)

Note. Three items ("contentment," "enjoyment," "relief") were combined to assess overall positive emotions (α = .85) and four items ("anger," "anxiety," "guilt," "sadness") were combined to assess overall negative emotions (α = .89).

In second step, a discriminant function analysis was conducted to determine the contribution of each expressed positive emotion to the differentiation between the conditions (e.g., Philippot, 1993). Findings for the items for "contentment," "enjoyment," "relief," and "hubristic pride" as independent variables, and the expression manipulation as the group variable, showed enjoyment to best differentiate the experimental conditions, r = .96 (see *Table 1.2*). Finally, an ANOVA conducted on negative emotions revealed a non-significant effect of gender and a significant effect of the expression manipulation, $F(1, 61) = 49.32$, p = 001, with the target student being perceived as expressing significantly more negative emotions in the suppression condition than in the expression condition. However, these negative emotions did not significantly exceed the

midpoint of the scale in the suppression condition (p = .93), indicating that they were evident but not intensely expressed. An inspection of the reported behavioral characteristics showed the most reported behavior cues in the suppression condition to be wandering eyes or looking upward (37%) and shrugged shoulders (15%). In contrast, the most commonly mentioned behavior cues in the expression condition were widely opened eyes (39%), smiling (37%), and direct eye contact (14%).

Table 1.2: Results from the Preliminary Study (N = 69) Including Correlations between Each Positive Emotion Item Expressed by the Target Student (Female and Male) and the Discriminant Function

	Discriminant function		
	Target	Female	Male
Enjoyment	.96	.81	.92
Contentment	.61	.78	.38
Authentic pride	.50	.17	.40
Relieve	.24	.37	.19

Note. Higher correlations signify greater contributions to the discrimination between the suppression and expression conditions.

In sum, these preliminary results revealed that participants perceived female and male target students in the suppression condition to express less positive emotions, particularly less enjoyment, as compared to target students in the expression condition. Moreover, participants rated the target student in the suppression condition as expressing more negative emotions than the target student in the expression condition. These findings, together with participants' reports of the behavior of the target students in the suppression condition, correspond with the behavioral characteristics of suppression reported in previous research (e.g., Gross & Levenson, 1997) and provide empirical support for the effectiveness of the videotaped expression manipulation used to test our

study hypothesis concerning social reactions to positive emotion suppression in the following larger-scale study. [4]

4.8 Study 3: Main Study

The present experiment was conducted to test the hypothesis that individuals would be evaluated as more likable and be more accepted by others when suppressing than when expressing positive emotions when in an outperformance situation, with the social benefits of suppression being less evident in non-outperformance situation. As such, this study follows from Studies 1 and 2 showing positive emotion suppression to be more evident in outperformance situations and motivated by concerns for the emotions and responses of others in more explicitly evaluating the extent to which individuals who suppress positive emotions are perceived by others.

4.8.1 Method

Participants and Design

One hundred ninety-five students (M_{age} = 16.97, SD_{age} = 0.72; 104 female) from the 10th-grade and 11th-grade of the highest track of the German education system (Gymnasium) participated in this study. We used a 2 (situation: outperformance vs. non-outperformance) by 2 (emotion expression: suppression vs. expression) between-participants design with likability and acceptance of the target student as dependent variables. Participants were randomly assigned to one of the four same-gender experimental conditions with n = 48-49 per condition.

[4] Our analyses revealed significant Suppression X Gender interactions for the expression of negative and positive emotions, authentic pride, Fs ≥ 4.04, ps ≤ .05, but not hubristic pride, p = .54. Thus, we additionally conducted all analyses for female and male target students separately. The results provided a very similar pattern. For each target student, the expression of positive emotions and authentic pride was rated significantly higher, ts ≥ 2.66, ps < .01, and the expression of negative emotions was rated significantly lower, ts ≥ -2.46, ps < .03, in the expression than in the suppression condition. For each target student, enjoyment was the best discriminating positive emotion, rs ≥ .81. The results further revealed that the female target student as compared to the male target student differentiated better between the suppression and expression conditions (canonical R^2_{female} = .96 vs. R^2_{male} = .74), thus providing an explanation for the significant interaction effect. Therefore, we decided to not separate the findings presented based on gender.

Procedure

The experiment was conducted in the computer rooms of two participating schools with groups of seven to 10 participants. Each participant was independently seated in front of a computer and was informed both of the purpose of the study as a general investigation of students' opinions concerning a video presentation as well as the confidentiality of their responses. Upon starting the study, participants answered questions about their age and gender (mandatory) in order to match participants to the same-gender experimental condition.

Participants subsequently received the instruction that a video scene would be presented without sound and were provided a written description of an achievement scenario to assist in understanding the video scene. Participants then read the scenario in which the situation was manipulated (outperformance vs. non-outperformance) and watched the video scene in which the same-gender target student's emotion expression was manipulated (suppression vs. expression). Following the video, participants were asked to rate the target student with respect to their likability and acceptability as a peer and completed a final set of questions concerning the experimental manipulations and demographic information (e.g., class, language skills, nationality). The entire study lasted approximately 20 min after which participants were thanked and debriefed, and provided a chocolate bar for their participation.

Manipulation of social situation (outperformance vs. non-outperformance condition). Participants read a scenario in which the target student ("the classmate") was described as having received a very good grade and two other students were described as having either received a very bad grade (outperformance condition) or a very good grade (non-outperformance condition). The exact wording in the outperformance condition was as follows:

> "Three students have just received their grades on a test and are discussing them with each other. Two of these students have just said that they performed poorly in the test. They received very bad grades. Now, it's their classmate's turn. S/he says that the test went very well for her/him. S/he received a very good grade. In

the following scene you will now see the classmate talk to the two other students."

In the non-outperformance condition, participants read an identical scenario with the exception of the second and third sentences that instead read: "Two of these students have just said that they performed well in the test. They received very good grades." To ensure that the scenarios were read thoroughly, participants were only able to proceed to the next page after 15 s had passed. All participants were instructed to imagine the situation as best as they could while watching the video.

Manipulation of emotion expression (suppression vs. expression condition). The video scene was displayed for 50 s without sound. In the suppression condition, the target student suppressed the expression of positive emotions while talking to two other students. In the expression condition, the same target student freely expressed positive emotions during the discussion (for a detailed description of the videos, see Preliminary Study).

Measures

Likability. A five-items measure was used to assess the perceived likability of the target student's based on Chaiken and Eagly's (1983) list of adjectives for likability. Participants responded on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) to items asking if "this classmate is likable/friendly/warm/approachable/especially nice" (α = .91).

Acceptance. A three-item scale measured participants' acceptance of the target student based on Wentzel's (1994) assessment of peer acceptance in school. The items were rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) and included: "I would like this classmate to be in my class," "I would like to engage with this classmate in school activities," and "I would like to have this classmate as coworker" (α = .88).

Manipulation check items. We used two items to test the effectiveness of the experimental manipulations. First, participants were asked to rate the extent to which the target student (i.e., classmate) expressed enjoyment in the video (1 = *not at all*, 7 = *very much so*). Second, participants were asked to rate their agreement that the two other

students in the video had received a poorer grade than their classmate (1 = *strongly disagree*, 7 = *strongly agree*).

4.8.2 Results

Manipulation Check

To test the effectiveness of the experimental manipulations, we first computed an ANOVA with situation and emotion expression as between-participants factors on participants' ratings of the enjoyment expressed by the target student. In accordance with the results of the preliminary study, results showed the target student to be perceived as expressing significantly less enjoyment in the suppression condition (M = 2.62, SD = 1.73) than in the expression condition (M = 6.26, SD = 1.10), $F(1, 185) = 298.46$, $p < .001$, $\eta_p^2 = .68$. We further computed an ANOVA with situation and emotion expression as between-participants factors on participants' ratings of the other students' performance that showed the main effect of situation to be significant, $F(1, 180) = 213.91$, $p < .001$, $\eta_p^2 = .54$. Participants in the outperformance condition agreed more strongly that the other students had performed more poorly than the target student (M = 6.26, SD = 1.20) compared to participants in the non-outperformance condition (M = 2.76, SD = 1.97). In both univariate analyses of variance, the effects of the interaction between situation and emotion expression were not significant, ps $\geq .21$. These results indicate that our experimental manipulations were successful with respect to the perceived emotion expression and relative performance of the target student.

Evaluation of the Target Student

We first computed separate ANOVAs on likability and acceptance with situation, emotion expression, and participants' gender as predictors to test for gender differences.[5] Although a matched design ruled out opposite-gender effects, the possibility remained that female participants' evaluation of the female target student might differ from male

[5] Our data showed that the measures for likability and acceptance were highly correlated, $r = .74$. However, because these measures reflect two different perspectives (likability as an attribute of the target student and acceptance as participants' desire to have contact with this student), we decided to report these results separately.

participants' evaluation of the male target student. Results showed a non-significant effect of the three-way interaction between situation, emotion expression, and gender, *p*s ≥ .87. As such, gender was not included as a predictor in the subsequent analyses.

Likability. We hypothesized that participants would evaluate the target student as more likable when this student suppressed rather than expressed positive emotions in the outperformance situation, with the benefits of positive emotion suppression not being evident in the non-outperformance situation. The results of the ANOVA on likability showed a non-significant effect of emotion expression, $p = .73$, and a significant main effect of situation, $F(1, 184) = 4.63$, $p = .033$, $\eta_p^2 = .03$. As expected, this effect was qualified by a significant Situation X Emotion Expression interaction, $F(1, 184) = 13.08$, $p < .001$, $\eta_p^2 = .07$, with group means and standard errors presented in *Figure 1.1*. As hypothesized, post-hoc contrasts showed participants in the outperformance condition to perceive the target student as significantly more likable when this student suppressed positive emotions ($M = 3.93$, $SD = 1.36$) rather than expressed positive emotions ($M = 3.16$, $SD = 1.41$), $p = .005$, $d = 0.58$. In contrast, participants the non-outperformance condition evaluated the target student as more likable when this student expressed positive emotions ($M = 4.29$, $SD = 1.33$) than when s/he suppressed positive emotions ($M = 3.65$, $SD = 1.27$), $p = .023$, $d = 0.48$. The results further showed the likability ratings of the target student who expressed positive emotions to be significantly lower in the outperformance condition than in the non-outperformance condition ($M = 3.16$ vs. $M = 4.29$), $p < .001$, $d = 0.84$. The likability ratings of the target student who suppressed positive emotions did not significantly differ between the outperformance and non-outperformance conditions, $p = .30$.

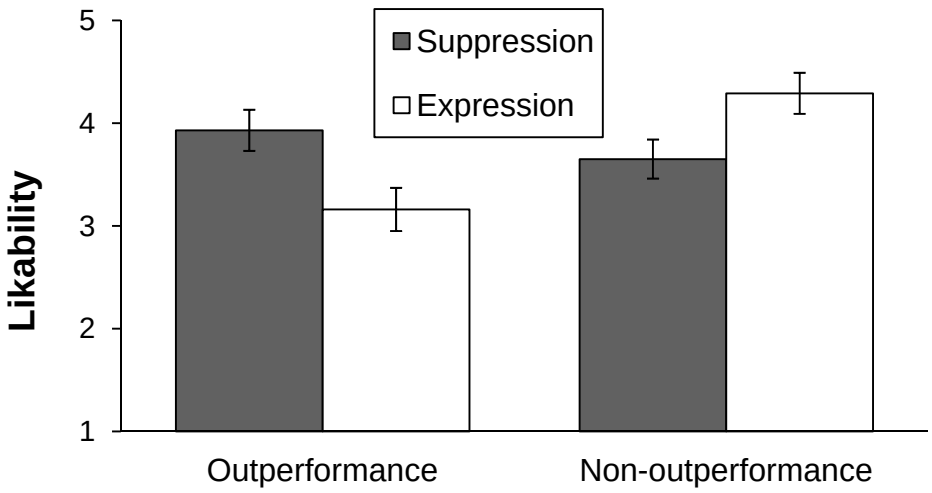

Figure 1.1: Group means and standard errors for likability of the target student who suppressed versus expressed positive emotions in the outperformance versus non-outperformance condition.

Acceptance. It was further hypothesized that participants would be more likely to accept the target student as a peer when this student suppressed rather than expressed positive emotions in an outperformance situation. An ANOVA on acceptance revealed a non-significant effect of emotion expression, $p = .11$, and a significant effect of situation, $F(1, 185) = 5.96$, $p = .016$, $\eta_p^2 = .03$. In line with our hypothesis, this effect was qualified by a significant Situation X Emotion Expression interaction, $F(1, 185) = 5.19$, $p = .024$, $\eta_p^2 = .03$. Group means and standard errors for acceptance are presented in *Figure 1.2*. As predicted, post-hoc contrasts showed that in the outperformance condition, participants accepted the target person significantly more when this student suppressed positive emotions ($M = 3.65$, $SD = 1.42$) than when this student expressed positive emotions ($M = 2.82$, $SD = 1.25$), $p = .006$, $d = 0.57$. In the non-outperformance condition, participants' evaluations did not significantly differ for the suppressing student as compared to the expressing student, $p = .67$. Moreover, the results revealed that participants were less likely to accept the target student who expressed positive emotions in the outperformance condition than in the non-outperformance condition ($M = 2.82$ vs. $M = 3.82$, $SD = 1.60$), $p = .001$, $d = 0.69$. No significant difference between the outperformance and non-

outperformance conditions was found on peer acceptance of the target student who suppressed positive emotions, $p = .91$.

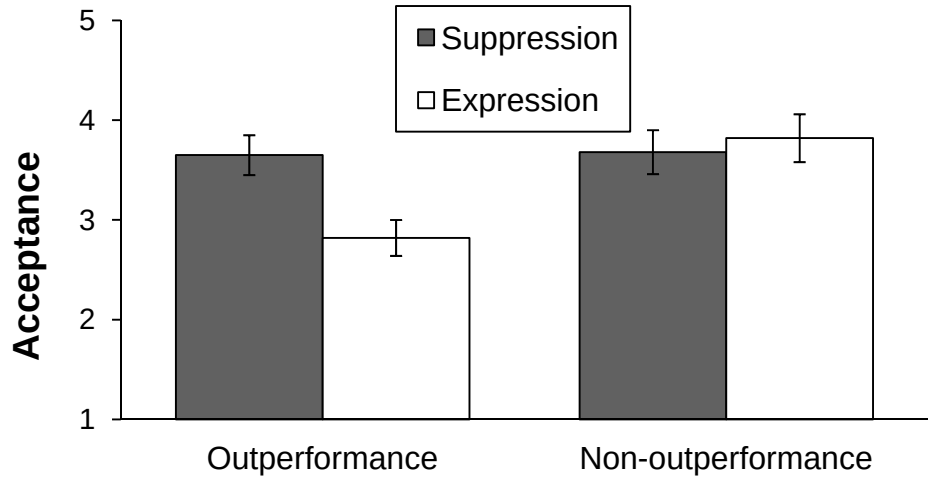

Figure 1.2: Group means and standard errors for acceptance of the target student who suppressed versus expressed positive emotions in the outperformance versus non-outperformance condition.

4.8.3 Discussion

Findings from Study 3 provided clear evidence in support of the hypothesis that suppressing one's positive emotion expression is more positively evaluated than expressing these emotions in outperformance situations as compared to non-outperformance situations. More precisely, when a successful target student was evaluated while interacting with other students who had performed poorly as compared to equally well, participants perceived the student to be more likable and were more likely to accept the student when s/he suppressed rather than expressed positive emotions. Given that the target student in the suppression condition expressed not only less positive emotions but also more negative emotions, that participants reported divergent perceptions of the target individual as a function of the outperformance element of the social situation is particularly remarkable. Consistent with our hypotheses, these findings effectively suggest that in an outperformance situation, and not in a non-

outperformance situation, the expression of positive emotions highlights one's superiority and is perceived as boastful, whereas suppression of positive emotions after success is perceived as more modest and considerate.

The results of post-hoc tests provide further insight into participants' perceptions of the target student: First, the target student who expressed positive emotions was evaluated significantly less favorably in the outperformance situation than in the non-outperformance situation. This finding suggests that positive emotions may communicate mixed messages depending on the kind of the achievement situation. Ironically, whereas positive emotions in the non-outperformance situation appear to convey that one is friendly, competent, and sociable (e.g., Kraut & Johnson, 1979), positive emotions when expressed in the outperformance situation seem to more simply imply that one is better than others.

Second, an expected result showed that the target student in the non-outperformance condition was *not* evaluated more favorably when they suppressed rather than expressed positive emotions. Moreover, results for likability revealed an opposite effect: The target student was perceived as *more* likable when this student expressed rather than suppressed positive emotions after receiving a good grade when in the presence of other students who had performed equally well. This finding is consistent with prior research showing the expression of positive emotions to typically be more positively evaluated than suppression (e.g., Reysen, 2005; Richards et al., 2003). However, a similar effect of the positive emotion expression was not found for the peer acceptance measure in the non-outperformance condition, our findings further suggest that positive emotion expression may be socially rewarding specifically with respect to evaluations of the target's personal characteristics as opposed to a social acceptance. In other words, whereas the individual may be perceived as more amiable if they express positive emotions after success, this evaluation does not appear to translate into accepting the individual into one's peer group. Further, it is also possible that suppression after success may to some extent be perceived as modesty (a socially desirable characteristic; cf. Sedikides, Gregg, & Hart, 2007) even in non-outperformance situations, thereby mitigating a possible negative effect of expression on peer acceptance.

4.9 General Discussion

The aim of the present research was to examine the role of outperforming others on the occurrence and social benefits of people's efforts to suppress positive emotions as compared to expressing these emotions in social settings. We investigated our hypotheses in three experimental studies focusing on typical everyday social situations encountered by high-school students in achievement settings. In Studies 1 and 2, our findings provided empirical evidence that individuals are more likely to suppress their positive emotions in outperformance situations than in non-outperformance situations. Moreover, rather than communicating friendliness to others by expressing positive emotions (Kraut & Johnson, 1979), our findings further reveal that individuals in outperformance situations tend to perceive suppressing positive emotions as more socially appropriate that, in turn, motivated them to use this strategy. In Study 3, findings indicated that suppression of positive emotions in an outperformance situation, but not in the non-outperformance situation, was indeed more favorably evaluated as compared to the expression of positive emotions. Together, our studies expand upon earlier research (Friedman & Miller-Herringer, 1991; Kalokerinos et al., 2014) in providing new empirical evidence showing individuals in everyday social situations to suppress their positive emotions when others performed more poorly than themselves. The present results also provide clear and new evidence of the effect of situational factors by demonstrating social benefits of suppression as compared to expression of positive emotions specifically in outperformance contexts.

These findings reveal that when individuals find themselves in an outperformance situation as compared to non-outperformance situation, they are more inclined to suppress their positive emotions to avoid negative social responses as well as solicit more positive evaluations from their peers. Our results suggest that although expressing positive emotions after success may not be socially disadvantageous per se, it may be detrimental in the presence of poorer-performing others. In fact, our findings showed participants' reactions to a target individual's expression of positive emotions in the presence of others who performed more poorly to be quite harsh as evidenced by significantly lower perceived likability and acceptance levels as compared to when the target individual suppressed their positive emotions. With respect specifically to our

study samples, such negative social responses may be particularly consequential for high-school students due to the psychological importance of establishing friendships during this developmental transition phase (Heckhausen, Wrosch, & Schulz, 2010; Wentzel, 1994). These results are also in line with previous evidence showing students who do well in school to express concern regarding negative responses from peers (Coleman & Cross, 1988; Cross, Coleman, & Stewart, 1993).

Importantly, future studies are warranted to examine the suppression of the positive emotion expressions in real-time outperformance versus non-outperformance situations as findings from prospective and retrospective self-report assessments (Studies 1 and 2) may differ from those obtained in real-time assessments (e.g., Goetz, Bieg, Lüdke, Pekrun, & Hall, 2013; Robinson & Clore, 2002). Nonetheless, these responses reveal individuals' understanding of how they would and should manage the expression of their positive emotions in specific social situations (Gnepp & Hess, 1986; Saarni, 1988) and can be assumed to act as important predictors of future behavior (Wirtz, Kruger, Napa Scollon, & Diener, 2003).

4.9.1 Social Consequences of Suppressing Positive Emotions in Outperformance Situations

The social benefits obtained from the suppression of positive emotions in outperformance situations stand not only in contrast with extant findings concerning the social effects of the expression of positive emotions (Harker & Keltner, 2001; Reysen, 2005), but also with those suggesting that suppression has primarily negative social consequences. Suppressing one's emotions has been suggested to alienate the individual from others (English & John, 2013), with studies showing individuals who suppress their emotions to be less attentive partners (Richards et al., 2003) and be less willing to develop close relationships with others than their not-suppressing counterparts (Butler et al., 2003). The present findings thus highlight the importance of considering specific aspects of the social setting when investigating the effects of suppression.

Similar findings as shown in the present research are also anticipated for other target groups and in other social situations. For instance, individuals who are more successful than others in the workplace, perhaps as evidenced by being promoted to a

superior position, would be expected to downplay their positive emotions in the presence of colleagues who were not promoted. Similarly, an individual who is very happy in a romantic relationship is likely to suppress expressing this happiness when encountering others who are experiencing relationship difficulties. In other words, various everyday situations exist in which individuals who are better off than others are likely to suppress positive emotions in order to maintain positive interpersonal relations. In both circumstances, it is likely that these individuals would be perceived more positively when they suppressed their positive emotions as opposed to when they expressed them. Moreover, in the light of previous evidence showing negative long-term social effects of self-enhancing behavior (Colvin, Block, & Funder, 1995), the suppression of positive emotions in outperformance situations may entail not only short-term but also long-term social benefits. More specifically, outperformers who tend to suppress their positive emotions may, in general, be perceived as social and considerate and thus perhaps further benefit by experiencing more satisfying and supportive long-term relationships.

4.9.2 Conclusion

Taken together, the present research provides consistent and ecologically valid empirical support for the prevalence and social benefits of the suppression of positive emotions, in contrast to the expression thereof, namely in achievement situations in which one outperforms others. These findings further indicate that individuals in outperformance situations tend to suppress their positive emotions despite the potential personal costs in order to attain social benefits and not disadvantage worse-off others. As such, the present results contribute to extant research on emotion regulation in underscoring the importance of investigating not only the expression but also the suppression of positive emotions, as well as the critical role of performance disparities between individuals when examining the occurrence and benefits of positive emotion suppression in social situations.

5 Second Line of Research

5.1 "It Ain't Over 'til It's Over: The Savoring of Success as a Function of Task Completion"

5.1.1 Summary

Situations in which one's success is an intermediate step of a larger task are typical in everyday life. The present study examined a common yet to date unexamined assumption that individuals are unlikely to savor success when they have not yet completed a task. In Study 1 (N = 113, undergraduates), performance outcome in a cognitive ability task (successful vs. average, i.e. "neutral") and completion of the task (in progress vs. completed) were manipulated and savoring was assessed. In Study 2 (N = 83, soccer players), savoring following a successful versus neutral outcome in a soccer match was assessed after the first half (in progress) and the end of the match (completed). Results showed that success was more positively experienced than neutral performance. However, individuals savored those positive experiences less when the task was in progress as compared to complete. These findings are discussed in terms of the underlying mechanisms and consequences for well-being.

5.1.2 Introduction

Following the impressive victory of the German national soccer team in the semi-final match of the World Cup 2014, the German national soccer coach, Joachim Löw, stated in an interview: "We shouldn't overestimate the result. We have to be humble and to prepare ourselves calmly for the final match." Undeniably, such achievements have a significant impact on individuals' emotional lives and typically lead to positive emotions. However, when one's success represents an intermediate step as part of a larger goal, these positive experiences are often not fully enjoyed. Such situations are typical in today's modern life in which one task is often followed by another in rapid succession resulting in subjective perceptions that one's work is never really done. Indeed, previous research has shown that when a task is still in progress, individuals are more likely to

focus on task completion in terms of how to avoid failure (Wortman, Costanzo, & Witt, 1973) or improve their performance (Markman, Gavanski, Sherman, & McMullen, 1993), as compared to when individuals had completed the task. In the present research, we investigated individuals' responses to successful performance in these situations. We proposed that, although success generally results in positive emotions, individuals would be less likely to focus on their momentary positive experience, that is, to "savor" the positive experience (Bryant, 2003), when a task is in progress as compared to complete.

Savoring Momentary Positive Experiences

Previous research underscores the importance of savoring of one's positive emotional experiences in order to prolong these experiences (Bryant, 1989; Bryant & Veroff, 2007). Studies have shown savoring following positive events to contribute to well-being and life satisfaction (e.g., Bryant, 2003; Jose, Lim, & Bryant, 2012; Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011) above and beyond the beneficial effects of positive events and the experience of positive emotions themselves (Langston, 1994). These studies implicate various responses related to how individuals can savor their positive events. For instance, people can share their positive events with others (Gable, Reis, Impett, & Asher, 2004; Langston, 1994), indulge in positive cognitions, or consciously focus on future, past and momentary positive events (Bryant, 2003; Feldman, Joormann, & Johnson, 2008; Nelis et al., 2011). In the present work, we evaluated savoring primarily as a deliberate focus on one's momentary positive experience (e.g., Bryant, 2003; Feldman et al., 2008). In both correlational and experimental research, such a conscious focus on momentary positive experiences following positive events has been found to prolong the enjoyment of these events and promote general positive affect (Bryant, 2003; Erisman & Roemer, 2010; Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). Moreover, growing research in the recent years, has demonstrated the importance of a mindful and conscious awareness of one's momentary experiences (e.g., Bishop et al., 2004; Brown & Ryan, 2003) and of interventions aimed at enhancing this ability to improve mental health (e.g., Baer, Carmody, & Hunsinger, 2012; Geschwind, Peeters, Drukker, van Os, & Wichers, 2011).

Effects of Task Completion on Savoring

Despite the potential benefits of savoring of positive experiences for individuals' well-being, existing research on savoring is limited. Moreover, existing research has primarily focused on individual differences in savoring with respect to personality traits such as self-esteem, extraversion, and neuroticism (e.g., Bryant, 2003; Ng & Diener, 2009; Wood, Heimpel, & Michela, 2003) whereas the effects of situational factors on savoring have been largely neglected. In the present work, we investigated if individuals' savoring of momentary positive experiences following success would depend on whether a task was completed or not. Despite a lack of existing research addressing this question, scattered empirical findings provide indirect support for the effect of task completion on savoring of one's success.

First, previous research suggests that the focus on affective experiences depends on an individual's attention capacity – with this capacity being especially limited when individuals are required to perform a task (Erber & Tesser, 1992) and are concerned about avoiding failure or improving their performance (Nelis et al., 2011). In other words, it is possible that individuals are unable to sufficiently focus on their positive experiences following successful performance due to their attention and thoughts being redirected toward task completion. One might also assume that individuals may avoid focusing on their positive experiences so as to not reduce their productivity and task performance (e.g., Mischel & Mischel, 1983). Furthermore, research suggests that individuals may evaluate their present achievements as less rewarding when they compare their achievements with desired future outcomes (Koo & Fishbach, 2010; Markman et al., 1993). Thus, one might assume that individuals might not savor success when a task is in progress due to this success being perceived as not good or important enough to be savored. Moreover, previous research has found that an over-valuing of one's success can foster disappointment if one is not successful on future tasks (e.g., Diener, Colvin, Pavot, & Allman, 1991; Mauss, Tamir, Anderson, & Savino, 2011; Parrott, 1993; Wortman et al., 1973). Thus, it is also possible that individuals "postpone" savoring following successful performance until they have finalized their task in order to mitigate possible disappointment.

As such, based on the related empirical evidence and our considerations with respect to savoring of momentary positive experiences, we assumed that individuals may focus on task completion rather than positive experiences resulting from interim successes in ongoing tasks. Thus, in the present research, we predicted that individuals would savor the positive experience following success less, when the task was in progress as compared to completed. Given previous research underscoring the importance of savoring with respect to psychological well-being and quality of life (e.g., Bryant, 2003; Erisman & Roemer, 2010), it was anticipated that examining the potential effects of task completion on the savoring of positive experiences would help to clarify and provide further knowledge concerning this underexplored emotional process.

5.1.3 The Present Research

In the present research, we investigated if the extent to which people savor their momentary positive experience following successful performance would depend on the performance situation, this is, whether individuals have completed the task or not. To ensure that there was a positive experience following successful performance to be savored, we assessed individuals' experience of positive emotions concerning their performance. To ensure that the positive experience and savoring were specific to success, we compared the extent of positive experience and savoring following successful performance to those following an average or "neutral" performance (i.e., a control group).

Our first hypothesis stated that the savoring of a positive experience following success should be stronger than following neutral performance, and primarily when the task was completed, as compared to when the task was in progress. In other words, task completion was proposed to moderate the effect of the performance outcome on savoring responses. With respect to success, we secondly predicted that individuals would savor the positive experience following success less when the task was in progress as compared to when individuals had completed the task.

Our study hypotheses were investigated in two different achievement situations, in both a laboratory and a field setting by evaluating individuals' spontaneous savoring responses. Study 1 was conducted in the laboratory with a cognitive ability task and

employed a between-participants design in which the task outcome (successful vs. neutral) and completion of the task (task in progress vs. completed) were manipulated. Study 2 was administered in the context of a real-life soccer match and employed a repeated-measure design in which soccer players reported savoring following a given performance outcome (successful vs. neutral) both at half time (match in progress) and after the match (match completed). To test the effect of the specific performance situation over and above the effects of specific personality traits previously found to be related to savoring, we controlled for self-esteem and extraversion (Bryant, 2003; Wood et al., 2003).

5.1.4 Study 1

In Study 1, participants worked on a cognitive ability task and were provided feedback on their performance, which was indicated to be either above-average (successful outcome condition) or average (neutral outcome condition). We manipulated the completion of the task by allowing participants to believe they have not yet completed the task and a similar task would follow (task in progress condition), or that the task was finished (task completed condition). We first predicted that the extent of savoring would depend on the performance situation such that savoring following successful performance in the task should to be stronger than savoring following neutral performance, with this effect only anticipated when the task was completed. With respect to successful performance, we secondly predicted that individuals would savor their positive experience following success less when the task was in progress as compared to complete.

Method

Participants and design. One hundred twenty-five German undergraduate students participated in the experiment, with data from four participants excluded due to suspicion regarding the feedback manipulation (final N = 121; M_{age} = 21.74, SD_{age} = 4.33; 83 female). We used a between-participants design with the factors consisting of performance outcome in the task (successful vs. neutral) and task completion (in progress vs. completed) with savoring of the positive experience as the dependent variable.

Participants were randomly assigned to one of the resulting four experimental conditions (n = 26-33 per condition).

Procedure. Participants arrived at the laboratory in groups, were seated at a desktop computer, and informed that the study would involve a computer-based concentration task. To increase the perceived relevance of this task, participants were informed of research showing concentration ability to be one of the most important predictors of academic success and efficient learning. In a first step, participants responded to items assessing self-esteem and extraversion imbedded among filler items concerning concentration and learning strategies. Participants subsequently responded to demographic items (e.g., age, gender, subject of their studies). In a second step, participants were provided a figure-recognition task developed for this study that was described to participants one of the most frequently used research methods to assess concentration ability. The task was designed such that participants' actual performance remained ambiguous (see Williams & DeSteno, 2008), and provided only predetermined performance feedback as outlined below.

Participants first read the task instructions, performed a trial run, and then worked on the task for 6 min. In the figure-recognition task, participants were required to count the number of target figures (i.e., circles) from among distracting figures (i.e., triangles) with the figures displayed on screen for 2 s. Following the task, participants received one of two types of feedback (successful vs. neutral outcome conditions) and were subsequently informed of having either not completed performing the task with a similar task to follow (task in progress condition) or having finished the entire task (task completed condition). Participants then completed survey items assessing their savoring of the positive experience at that moment as well as their positive emotions concerning their performance feedback. Finally, participants were asked what they expected to do next in the study and their perceived aim of the study. The experiment lasted approximately 30 min after which participants were thanked, debriefed, and compensated with 9 Euros or course credit.

Manipulation of the performance outcome in the task (successful vs. neutral condition). Participants were informed that their concentration ability would be assessed based on the number of completed trials and correctly estimated trials in the figure-

recognition task. They were additionally informed that their scores would be compared to those of other students their age to facilitate interpretation. Following the figure-recognition task, performance scores were displayed on screen for 30 s. In the successful condition, participants' results were presented as being above the average for other students, whereas in the neutral condition, participants' results were shown as average compared to others' scores. The specific text presented in each condition was as follows: "Your results are better than [the same as] the concentration ability of students in your age. Your concentration ability is outstanding [average]."

Manipulation of task completion (in progress vs. completed condition). After receiving performance feedback, participants in the task in progress condition read the following: "The assessment of your concentration ability is not yet complete. You will now proceed to the next recognition task, a letter-recognition task." To emphasize the importance of the upcoming performance, participants were informed that the figure-recognition task assessed their concentration ability in the visual-figural domain, whereas the letter-recognition task would assess their concentration ability in the visual-verbal domain. In the task completed condition, participants were thanked for completing the figure-recognition task and informed that the concentration ability assessment was now complete.

Measures

Self-esteem and extraversion. Self-esteem was measured using a translated version of the 10-item Rosenberg (1965) Self-Esteem Scale. Extraversion was measured using the 12-item subscale from a shortened German version of Costa and McCrae's (1992) Big Five Personality Inventory (Borkenau & Ostendorf, 2008). Participants were asked to indicate the extent to which they disagree or agree with the statements on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). Alpha coefficients were $\alpha = .88$ for self-esteem and $\alpha = .81$ for extraversion.

Savoring. To assess savoring of positive experiences, nine items were derived and translated from the Responses to Positive Affect Scale (Feldman et al., 2008). Scale items evaluated individuals' thoughts concerning their positive emotional experiences and positive self-qualities at that particular moment (e.g., "I savor this moment," "I think

about how happy I am," "I think about how proud I am of myself"). The original rating scale assessing occurrence frequency was modified to have participants respond on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). To underscore the momentary nature of the measure, participants were provided the following scale preamble: "Achievement situations can elicit different thoughts in different people. Below are several statements that might describe what is going through your mind in this particular situation." An average score as a composite of savoring was computed for subsequent analyses ($\alpha = .93$).

Positive emotions. Four items assessing positive emotions ("happiness," "enjoyment," "pride," "relief") were translated from the Geneva Emotion Wheel (Scherer, 2005; Scherer, Shuman, Fontaine, & Soriano, 2013). Participants were asked to rate on a 7-point scale the extent to which they experienced each of these emotions concerning their performance feedback (1 = *not at all*; 7 = *extremely*). The average score was used as a composite of positive emotions in the subsequent analyses ($\alpha = .84$).

Task completion. To evaluate the clarity of our experimental instructions concerning the completion of the concentration ability task, participants were asked what they expected to do next in the study ("I have to work on a second recognition task" vs. "I finished the task").

Results

Manipulation check: Task completion. Concerning whether participants correctly perceived having to continue a second task as opposed to having completed the entire assessment, a chi-square analysis indicated a significant effect of condition, $\chi^2(1) = 86.55$, $p < .001$, showing our manipulation to be successful.

Positive emotions. To test whether participants who received feedback indicating above average performance in the task (successful condition) reported stronger positive emotions about the feedback as compared to participants provided average performance feedback (neutral condition), an ANOVA on positive emotions was conducted with performance outcome and task completion as between-participants factors. Findings showed a significant effect of performance outcome, $F(1, 114) = 27.33$, $p < .001$, $\eta_p^2 = .19$, with participants in the successful outcome condition reporting significantly higher

levels of positive emotions (M = 4.78, SD = 1.43) than participants in the neutral outcome condition (M = 3.48, SD = 1.29). The main effect of task completion and the interaction between performance outcome and task completion were not significant, ps ≥ .17. These results suggest that the successful outcome was indeed more positively experienced than the neutral outcome, both when the task was in progress and completed. With respect to task success, there was no significant effect of task completion on participants' positive experience.[6]

Savoring. An ANCOVA on savoring of the positive experience with performance outcome and task completion as between-participants predictors was conducted with self-esteem and extraversion included as covariates. Results showed significant main effects of performance outcome, $F(1, 107) = 11.74$, $p = .001$, and task completion, $F(1, 107) = 4.30$, $p = .041$, as well as a significant interaction between performance outcome in the task and task completion on savoring, $F(1, 107) = 4.74$, $p = .032$, $\eta_p^2 = .04$. Adjusted means and standard errors of savoring by condition are presented in *Figure 2.1*.

In support of the first study hypothesis, post-hoc comparisons showed successful participants who had completed the task to report savoring the positive experience more (M = 4.02, SE = .22) than those who received average performance feedback (M = 2.76, SE = .24), $p = .001$, d = 1.09. In contrast, participants who were informed of having to continue the task showed no significant difference in savoring across task performance conditions, $p = .30$. In support of the second study hypothesis, among participants who received a successful performance outcome, those in the task in progress condition reported savoring the positive experience significantly less (M = 3.04, SE = .21) than those in the task completed condition (M = 4.02, SE = .22), $p = .001$, d = 0.84.

[6] We additionally tested whether participants differed (a) in the experience of negative emotions concerning the performance in the task, (b) their overall motivation to perform well in the study, (c) their perceived importance of concentration ability, and (d) their motivation to engage in pleasant activities across the conditions. Results showed that participants in the successful condition experienced negative emotions significantly less strongly (M = 1.68, SD = 0.87) than participants in the neutral condition (M = 2.06, SD = 1.05), $p = .029$. Significant effects were not observed for task completion or its interaction with performance outcome on negative emotions, ps ≥ .84. No significant differences in general motivation, general importance, and preferences for pleasant activities across the conditions were found.

Participants who received a neutral outcome did not significantly differ in savoring between the task completion conditions, $p = .41$, suggesting that the effect of task completion was specific to the savoring of success experience. With respect to covariates, ANCOVA results showed a significant effect of self-esteem, $F(1, 107) = 13.10$, $p < .001$, but not extraversion, $p = .22$, on savoring.[7]

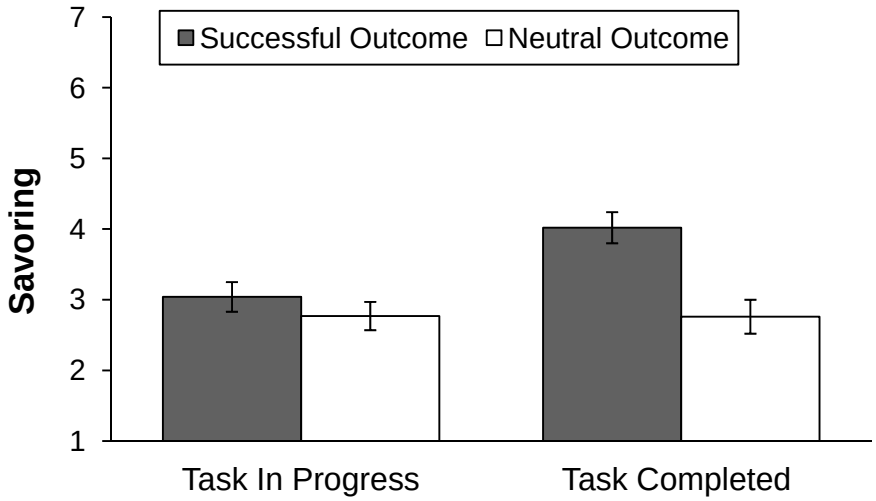

Figure 2.1: Adjusted group means and standard errors for savoring following successful versus neutral outcome in the task in progress and task completed conditions in Study 1.

Discussion

In the first study, our results confirmed that successful performance in the task led to a more intense positive emotional experience than neutral performance, both during the task and after task completion. In line with our prediction, savoring following successful performance was stronger than following neutral performance only when the task had been completed, and not when the task was in progress. As predicted, with respect to successful performance, our results further showed that individuals reported savoring the momentary positive experience following success less when they had not

[7] All univariate analyses of variance were also conducted excluding self-esteem and extraversion as covariates. Whereas the specific group contrasts were consistent with the study hypothesis, the effect of the interaction between performance outcome and task completion on savoring in the ANOVA failed to reach significance, $p = .18$.

yet completed the task as compared to when the task was completed. As such, task completion was not found to influence individuals' positive experience concerning their successful performance but the savoring of their positive experience in that moment. Together, these findings provide support for our hypotheses and suggest that when task performance is not yet finished, individuals are unlikely to savor their positive experience resulting from success. We aimed to replicate and extend these results in a second study to a different performance situation in a field setting: a real-life soccer match.

5.1.5 Study 2

In Study 2, we aimed to replicate and extend the results of Study 1 by assessing how individuals savor positive experiences following success in a real-life setting. We investigated savoring in the sports domain by evaluating the responses of players during an actual soccer match. The soccer match setting was selected as it was a particularly suitable natural setting allowing us to compare savoring responses when a task was in progress as opposed to after it was completed. Moreover, the soccer match setting enabled us to investigate savoring responses to performance outcomes that were not manipulated but highly engaging for participants. In contrast to Study 1, in which a between-participants design was employed, the half-time outcome of a soccer match should be more clearly understood as an interim outcome constituting part of a larger, in-progress task. More specifically, the soccer match was evaluated as a natural repeated-measures design, in which we assessed players' savoring responses to their team leading (successful condition) versus being tied (neutral condition) both at half-time (match in progress condition) and after the match (match completed condition). We proposed that whether the match was ongoing or completed should determine the amount of savoring reported. We first predicted that individuals would report stronger savoring following a leading score than a tied score only after the match, rather than when the match was in progress. With respect to success, we secondly predicted that the extent of savoring following a leading score would be lower when the match was in progress as compared to when it was completed.

Method

Participants. One hundred sixty-one German male soccer players from 15 regional teams affiliated with the DFB (German Soccer Association) participated in the study. From this initial sample, the data of players from nine teams were included in subsequent analyses (a description of this selection procedure is provided in the design section). The final sample included only data from players who participated in both assessment phases ($N = 83$, $M_{age} = 25.11$, $SD_{age} = 5.04$).

Design. We used a repeated-measures design evaluating match completion as the within-participants factor (half-time assessment = match in progress condition vs. post-match assessment = match completed condition) and performance outcome as the between-participants factor, with savoring as the dependent variable. Participants were assigned to performance outcome conditions based on their team score at half-time and after the match. We implemented three conditions based on the data collected: Leading at both half-time and after the match (successful/successful condition; $n = 30$), tied at half-time and leading after the match (neutral/successful condition; $n = 37$), and leading at half-time and tied after the match (successful/neutral condition; $n = 17$).

Procedure. The study was conducted during an actual soccer match with each match occurring during the qualifying rounds for the upcoming season. Prior to the match, participants were briefly informed of the study aim to investigate motivational strategies in soccer players and were assured of the confidentiality of their responses. Participants received a questionnaire after both the first half and last half of the match (each half being 45 min in duration). Each questionnaire was designed to be relatively short (2-6 min) to minimize intrusion and not disturb the match. Participants indicated their player number and age on the first page of the questionnaire to match responses across time points, with this page being removed after the study to maintain anonymity. Scores for each team at half-time and at the end of the match were recorded by the experimenter.

The first questionnaire was administered immediately following the start of the half-time break (15 min) during the match (match in progress condition). Participants received questions addressing their positive emotions concerning the score in the match

and their savoring of the positive experience at that particular moment. The second questionnaire was administered immediately after the match (match completed condition) and included identical questions. In addition, participants completed questions assessing self-esteem, extraversion, and demographic information (e.g., age, profession, language skills, nationality). After completing the second questionnaire, participants were debriefed, thanked for their participation, and compensated with an energy bar.

Measures

Positive emotions. Similar to Study 1, a composite measure of positive emotions was assessed by averaging participants' ratings across the four emotions of "happiness," "enjoyment," "pride," and "relief". Participants were asked to rate on a 7-point scale the extent to which they had experienced each of these emotions concerning their score in the match (1 = *not at all*; 7 = *extremely*; half-time/final: α = .92/.93).

Savoring. To assess savoring of positive experiences in the present moment, participants were asked to describe what was going through their mind in that particular situation. They rated three Likert-style items developed for this study asking if they were "savoring this moment", "thinking about what makes [them] feel happy in this situation," and "thinking about what makes [them] feel pleasure in this situation" (1 = *strongly disagree*; 7 = *strongly agree*; half-time/final: α = .75/.85).

Self-esteem and extraversion. We used the same measures as in Study 1 to assess self-esteem (Rosenberg, 1965) and extraversion (Borkenau & Ostendorf, 2008). Alpha coefficients were α = .80 for self-esteem and α = .73 for extraversion (1 = *strongly disagree*; 7 = *strongly agree*).

Results

Positive emotions. To evaluate whether leading the match (successful outcome condition) was more positively experienced than a tied score (neutral outcome condition), univariate analyses of variance were conducted on positive emotions with performance outcome as between-participants factor and match completion as within-participants factor. Results showed significant effects of both outcome, $F(1, 75) = 20.48$, $p < .001$, and match completion, $F(1, 75) = 5.98$, $p < .001$, as well as a significant

interaction between outcome and match completion, $F(2, 75) = 75.90$, $p < .001$, $\eta_p^2 = .67$. Group means and standard deviations for each outcome and match completion condition are outlined in *Table 2.1*. Post-hoc comparisons with Bonferroni correction showed that a leading score was associated with significantly stronger positive emotions than was a tie, ps $< .002$, ds ≥ 1.10. Moreover, our results showed the intensity of positive emotions in the successful/successful condition to not significantly differ across match completion conditions, $p = .50$. These results suggest that a leading score was more positively experienced than a tied score, both during and after the match, and further indicate that match completion did not significantly affect participants' positive emotional experiences concerning a successful performance outcome.[8]

Table 2.1: Descriptive Statistics for Positive Emotions Following Successful and Neutral Outcome at Half-Time/the End of the Match in Study 2

	Match In Progress	Match Completed
Outcome	*M* (*SD*)	*M* (*SD*)
Successful/Successful	5.22 (0.95)	5.39 (1.24)
Neutral/Successful	3.14 (1.20)	6.12 (1.14)
Successful/Neutral	4.33 (1.04)	2.38 (1.69)

Savoring. An ANCOVA analysis with match completion as repeated-measures factor and performance outcome as between-participants factor was conducted on savoring with self-esteem and extraversion included as covariates. Results showed a non-significant effect of match completion, $p = .30$, a significant effect of performance outcome, $F(1, 68) = 5.92$, $p = .004$, and a significant interaction effect, $F(2, 68) = 13.41$, $p < .001$, $\eta_p^2 = .28$. The effects of the covariates on savoring were not significant, ps $\geq$

[8] We additionally explored whether participants differed in their overall motivation and their perceived general importance of the match. Results showed no significant effects of performance outcome, ps $\geq .57$.

.55.[9] Adjusted means and standard errors of savoring are displayed in *Figure 2.2*, with post-hoc comparisons between group means conducted using the Bonferroni correction.

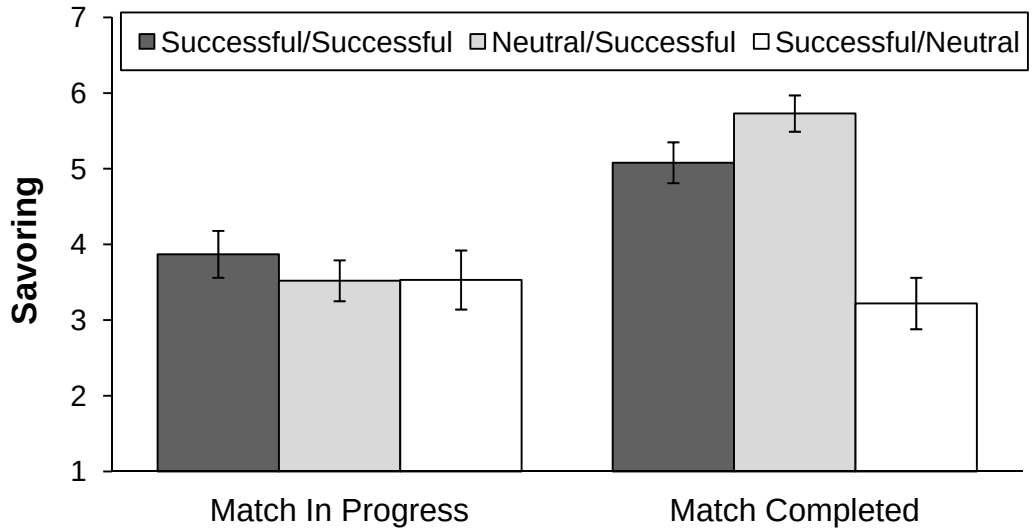

Figure 2.2: Adjusted group means and standard errors for savoring following successful and neutral outcome at half-time/the end of the match in Study 2.

The first study hypothesis asserted that when the match was completed, a leading score (successful/successful and neutral/successful conditions) would result in greater savoring than a tied score (successful/neutral condition), as compared to when the match was underway. The results supported this hypothesis in showing that only when the match was completed did participants in the successful/successful condition (M = 5.08, SE = .27) and the neutral/successful condition (M = 5.73, SE = .24) report savoring more than those in the successful/neutral condition (M = 3.22, SE = .34), ps < .001, ds ≥ 1.35. In contrast, there were no significant differences observed in savoring across the performance outcome conditions when assessed at half-time of the match, ps = .99.

[9] Results of the Box test confirmed that variances did not significantly differ across performance in the match and match completion conditions, $p \geq .98$. Thus, the assumption of variance homogeneity was not violated despite the unequal cell sizes allowing a full interpretation of the present results (cf. Milligan, Wong, & Thompson, 1987). All analyses were also conducted without self-esteem and extraversion as covariates with the results remaining the same.

The second study hypothesis proposed that participants who achieved successful performance outcomes in the match (successful/successful condition) would savor the positive experience less when the match was in progress as compared to when it was completed. In line with our prediction, results showed participants in this condition to indeed report savoring the success significantly less at half-time (M = 3.87, SE = .31) than after match (M = 5.08, SE = .27), p = .001, d_z = 0.76.[10]

Discussion

In Study 2, the findings indicated that a leading score was more positively experienced than a tied score, both during and after the match. In line with our hypothesis, higher levels of savoring of the positive experience were found following a leading score, as compared to a tied score, albeit only after the match was completed as opposed to when it was in progress. As predicted, results further showed that players with a leading score reported lower savoring of the positive experience when the match was in progress than when it was completed. The present findings replicate and extend the results of Study 1 to a different achievement situation in a naturally occurring setting. More specifically, these findings show soccer players to be particularly unlikely to savor their success when the match was not yet completed, or before the match is completed. These results further suggest that individuals savor success primarily when this success represents a final outcome and not an interim outcome.

5.1.6 General Discussion

Successes typically result in positive emotional experiences with recent research emphasizing the importance of savoring such positive experiences for psychological well-being (e.g., Bryant, 2003; Bryant & Veroff, 2007; Erisman & Roemer, 2010; Quoidbach et al., 2010). In two studies, we showed that individuals savor their success

[10] Multiple comparisons further showed participants in the neutral/successful condition to report greater savoring when the match was completed than at half-time, $p < .001$. Interestingly, no significant difference in savoring across the match completion conditions was found for participants in the successful/neutral condition, p = .43. Whereas the first result may reflect an improvement in participants' performance during the match, the second finding is in line with our predictions concerning the effect of match completion on savoring.

less when they have not yet completed the task, as compared to when the task was completed. These findings are in line with our predictions and provide new empirical evidence in support of the commonly held view that individuals tend not to savor success when a task is not yet finished. It seems that individuals tend to draw less attention on momentary success experiences when success represents an intermediate step of a task as opposed to a final disposition of the task. Importantly, these results were shown in two different performance situations including a controlled laboratory setting (Study 1) as well as a real-life soccer match setting (Study 2) thereby strengthening the generalizability of our evidence. These results further suggest that beyond the effects of personality variables (e.g., Bryant, 2003; Wood et al., 2003) the specific nature of the situation can also explain whether individuals savor positive experiences. Together, these findings contribute to research on how individuals deal with success and positive emotions which to date is notably limited. Indeed, most existing research has focused primarily on how individuals deal with negative affect following setbacks (e.g., Folkman & Lazarus, 1985; Neff, Ya-Ping, & Dejitterat, 2005; Schutz, Distefano, Benson, & Davis, 2004).

Importantly, our results further showed that task completion did not significantly impact the experience of positive emotions concerning a successful performance suggesting the effect of task completion on savoring to not be simply explained by differences in the positive experience. This finding is in line with previous research stating the experience of positive emotions to be distinct from an intentional savoring of positive emotions (Bryant, 2003; Bryant & Veroff, 2007; Langston, 1994). This result highlights the need for future research to obtain a clearer understanding of the extent to which savoring and positive emotions are interrelated and by which processes savoring works to prolong these emotions. Further studies examining the savoring of success by way of behavioral or observational methods are warranted to replicate the present findings obtained using self-report methods.

In the present work, we proposed that individuals would not savor their successful performance when the task was in progress so as to not compromise their task performance by diverting their attention from it or because they perceived the momentary success to be of little importance (e.g., Diener et al., 1991; Koo & Fishbach, 2010;

Parrott, 1993). In other words, individuals were assumed to be more likely to focus on task completion rather than on how good they felt about their success at that particular moment. Future investigations of the underlying reasons for the effect of task completion on savoring are warranted as is further research on the consequences of this effect, for instance, on individuals' motivation, task focus, and well-being.

More specifically, although lower levels of savoring after success might represent a reasonable response when the task is underway, previous research has shown the tendency to savor positive events to contribute to well-being and life satisfaction (Bryant, 2003; Quoidbach et al., 2010). Moreover, research suggests that those individuals who do not personally invest in consistently savoring and appreciating daily positive events are unfortunately at risk of also ignoring larger positive events in their lives (Sheldon, Boehm, & Lyubomirsky, 2013; Sheldon & Lyubomirsky, 2012). Indeed, given that such situations in which one's tasks are immediately followed by others are quite typical in modern society, individuals may over time not be afforded sufficient or ideal opportunities to savor success experiences. As such, these sustained lower levels of savoring could also be assumed to have negative consequences for individuals' long-term well-being. Thus, with respect to quality of life, an important first step toward savoring positive experience may be to temporarily step off the achievement treadmill before these positive moments are lost in the day-to-day business of performance.

In sum, the present research provides new empirical evidence from both experimental and field research showing that individuals are unlikely to savor successes when a task is not yet complete, and suggests important implications with respect to the underlying mechanisms as well as consequences of this effect.

5.2 "Responses to Success: Seeking Pleasant Experiences Before a Task is Complete?"

5.2.1 Summary

Although indulging in pleasant experiences after achieving success may be hedonically rewarding, the present research proposed that individuals might forego pleasant experiences when they have not yet completed a task. One hundred and fifteen participants worked on a task and received feedback on their performance (i.e., successful or average). The completion of the task was manipulated (task in progress vs. completed) and participants reported the extent of their motivation to engage in activities of pleasant, neutral and unpleasant valence. Results showed that after achieving a successful performance, individuals expressed a lower desire to engage in a pleasant experience when the task was in progress than when the task was complete. The effect of task completion was not found for participants who achieved an average performance or on the motivation to engage in neutral and unpleasant activities. These findings are discussed in light of the underlying mechanisms and consequences of the tendency to forego pleasant experiences.

5.2.2 Introduction

The potential benefits and costs of seeking pleasure in life have been a longstanding philosophical dispute. Pleasure is defined by a "positive experienced state that we seek and that we try to maintain or enhance" (Rozin, 1999, p. 112). Individuals seek pleasant experiences due to their hedonic motivation, as pleasant experiences feel good per definition (e.g., Larsen & Prizmic, 2000; Tugade & Fredrickson, 2007). In the present research, we investigated individuals' seeking of pleasant experiences specifically following a successful achievement.

In particular, after achieving a successful performance, indulging in pleasant experiences may be perceived as rewarding by individuals because it prolongs their positive emotions following success. Indeed, studies suggest that individuals typically strive to protect their positive emotional states (Isen & Simmonds, 1978) and have shown that individuals in positive moods thus prefer to engage in pleasant activities more

than individuals in neutral moods (e.g., Handley, Lassiter, Nickell, & Herchenroeder, 2002; Wegener & Petty, 1994). Moreover, the motivation to engage in pleasant experiences following success may also reflect individuals' desire to enjoy and savor one's outstanding performance (e.g., Bryant, 2003; Bryant & Veroff, 2007). This motivation can be evident in everyday life, such as when individuals gratify themselves following success, share positive events with others, and celebrate such events (Gable, Reis, Impett, & Asher, 2004; Langston, 1994; Masters, 1972).

However, previous research further suggests that although pleasant experiences may satisfy individuals' hedonic needs, seeking pleasure may be associated with pursuing short-term goals by way of giving into short-term desires and temptations. This research has found that indulging in pleasant emotions can interfere with the pursuit of one's long-term goals, such as focusing on an ongoing task (Katzir, Eyal, Meiran, & Kessler, 2010). This finding is consistent with research stating that the experience of pleasure can evoke openness for other possibilities rather than the task or goal currently being pursued and signal that no effort is needed as one's goal has been achieved (e.g., Carver, 2003; Fredrickson, 2001; Fredrickson & Branigan, 2005; Gable & Harmon-Jones, 2008).

Thus, in the present research, we proposed that individuals will seek pleasant experiences following a successful performance depending on the situation in which individuals have achieved this success. More specifically, we proposed that the motivation to engage a pleasant experience may be determined by whether individuals have completed a task or not. We assumed that when individuals have not yet completed performing the task and have further performance ahead, rather than striving for pleasant experiences individuals may instead strive to stay focused on task completion. Given that pleasant experiences might interfere with focus on the task and signal that the task has been finished, this assumption corresponds with previous findings suggesting that individuals may forego immediate pleasures for the sake of future positive outcomes (Mischel & Mischel, 1983; Tamir, 2005, 2009). As such, we predicted that seeking pleasant experiences may be a less favored response to successful performance when the task is in progress, as compared to when the task was completed. To date, such a prediction has yet to be investigated as previous research has drawn little attention to

how individuals respond to successful performances and has primarily investigated how individuals deal with setbacks (Langston, 1994).

5.2.3 The Present Study

The present research investigated if the extent to which individuals seek pleasant experiences following a successful performance depends on whether individuals have completed a task or not. As we reasoned that individuals seek pleasant experiences following success in order to maintain and enjoy their existing positive experiences, we additionally assessed individuals' experience of positive emotions concerning their performance. Moreover, to ensure that both positive emotions and the desire for a pleasant experience were specific to success, we compared the extent of the experience of positive emotions and the extent of the desire for a pleasant experience following a successful performance with those following an average performance (i.e., control group). Using a control group with average rather than below average performance attainment was perceived as particularly suitable, as a failure may cause intense negative emotions, and thus, individuals may prefer to engage in pleasant experiences in order to overcome this negative experience.

Our first prediction stated that individuals would seek pleasant experiences following a successful performance more than following an average performance but only when individuals have completed the task, as opposed to when the task was in progress. With respect to successful performance, we secondly predicted that individuals would seek pleasant experiences following task success less when the task was in progress than when complete. These hypotheses were tested in a quasi-experimental study in which participants worked on a cognitive ability task. Participants' performance in the task was measured and they were provided feedback on their performance outcome, which was indicated to be either successful or average. To manipulate task completion, after receiving performance feedback participants were told that they either had not yet finished the entire task and a similar task would follow (task in progress) or that they had finished the entire cognitive ability task (task completed). To evaluate the extent to which individuals seek to engage in a pleasant experience following task success as a function of task completion, participants were provided descriptions of video scenes associated with pleasant valence and reported how much they would like to watch

these video scenes at that particular moment. In addition to pleasant videos, participants were also presented video descriptions of neutral and unpleasant valence to rule out that task completion may influence participants' overall motivation to engage in any activity of any emotional valence. Thus, we did not predict any effect of task completion on the motivation to watch these neutral and unpleasant scenes. Lastly, we controlled for the effects of personality traits (i.e., self-esteem, extraversion), which have been identified to influence individuals' preferences for pleasant experiences (e.g., Wood, Heimpel, & Michela, 2003).

Importantly, given that a pleasant experience has been found to be only implicitly associated with a short-term goal (Katzir et al., 2010), the use of video scenes to assess pleasant experience seeking as a function of task completion was perceived as particularly beneficial. Compared to direct self-report assessments such a behavior-related assessment allowed participants to express their desire to seek a pleasant experience without them needing to be explicitly aware of this intention (e.g., Erber, Wegner, & Therriault, 1996; Tamir, 2009). Six video descriptions were created for this study (one video description was derived from Gendolla, 2012) and pretested to determine whether the descriptions could indeed be differentiated by their emotional (i.e., pleasant, neutral and unpleasant) valence.

Pretest

Of the six video descriptions created, pleasant, neutral, and unpleasant videos were each represented by two descriptions. Twenty-eight German undergraduate students (M_{age} = 23.97, SD_{age} = 1.75; 19 females) received a questionnaire presenting the video descriptions in a randomized balanced order. Participants were asked to imagine that they would watch the video and to report for each video how they expected to feel when watching it on a single-item 7-point scale (1 = *very unpleasant*, 4 = *neutral,* 7 = *very pleasant*). A repeated-measures univariate analysis of variance revealed a significant effect of video description, $F(2, 25) = 22.51$, $p < .001$, $\eta_p^2 = .84$. Post-hoc tests showed that the supposed pleasant videos were evaluated to be significantly more pleasant than the supposed neutral videos, and these, in turn, more pleasant than the supposed unpleasant videos, all *p*s < .001. Means and standard deviations for the perceived pleasantness of the video descriptions are displayed in *Table 2.2*. In sum, the present

results provide support for the differentiation of the six video descriptions by their valence of pleasant, neutral and unpleasant.

Table 2.2: Group Means and Standard Deviations of Pretest Video Scene Pleasantness Ratings ($N = 28$)

Video Scenes	*M* (*SD*)
(1) The New Year's Eve party. A documentary about four friends celebrating and dancing together.	5.41 (0.93)
(2) A wedding like in "Thousand and One Nights". Family and friends come together and celebrate three days and nights.	5.67 (1.07)
(3) Over the course of time. A historian reflects on the demographic changes in Germany.	4.11 (0.85)
(4) From water to ice. A video documenting this physical phase transition.	4.11 (0.80)
(5) Poverty makes sick. A report about the dramatic risks of the social imbalance for health.	2.93 (0.87)
(6) The suffering of the civilian population. A report about violation of human rights, infringements and violence during wars.	2.26 (1.10)

Method

Participants and design. One hundred fifty-seven German undergraduate students participated in the experiment. A between-participants design was employed with the factor completion of the task (task in progress vs. completed) and performance outcome (successful vs. average), and the extent of pleasant experience seeking as the dependent variable. Participants were randomly assigned to one of the two task completion conditions. The assignment to either the successful or average performance outcome condition was based on participants' actual performance on the task. For this purpose, participants' results from the task were compared with the results of 121 undergraduate students who had performed an identical task ($M_{age} = 21.74$, $SD_{age} = 4.33$ [Schall, Goetz, Martiny, & Hall, manuscript in preparation]). Based on this comparison,

36 participants were assigned to the successful outcome condition (in progress/completed: n = 17/19) and 79 participants to the average outcome condition (in progress/completed: n = 43/36). Participants with below average performance were not included in the subsequent analyses for reasons outlined in the present study section. The final study sample included 115 participants (M_{age} = 21.89, SD_{age} = 2.50; 56 females).

Procedure. Participants completed the study on personal computers in a laboratory. At the beginning of the experiment, participants were informed that the study would assess their concentration ability, which was emphasized to be one of the most important predictors of students' academic success. First, participants responded to items assessing self-esteem and extraversion. The items were embedded among filler items assessing participants' concentration and learning skills. Participants also answered questions regarding demographic information.

Second, participants were informed that their concentration ability would be assessed in a "figure-recognition task", with recognition tasks described to be the most frequently used method in assessing cognitive ability. The task was employed as a 'filler' task for participants to engage in and was not intended to measure cognitive ability in any sense other than to assign the performance outcome factor. Participants received detailed instructions, performed a trial run, and then worked on the task for 6 min. In the task, participants had to correctly estimate the number of target figures (i.e., circles) among distracting figures (i.e., triangles) displayed on the computer screen for 2 s. Following the task, participants received feedback on their performance (successful vs. average outcome). They were further informed that either they had not finished the assessment and would subsequently work a similar recognition task (task in progress) or that they had finished the entire assessment (task completed).

Participants further read that after completing the cognitive ability task (for the task completed group) or before working on the next task (for the task in progress group), they would watch a video scene. They were asked to report how much they would like to watch each of the six video scenes based on the descriptions presented. They were then asked to report how they felt after receiving their performance feedback. Emotions related to task feedback were assessed at the end of the experiment in order to conceal the purpose of rating the video descriptions. Lastly, participants were asked to report

their perceptions of the importance of their performance, the difficulty of the figure-recognition task and the intent of the experiment. Participants completed the study after approximately 40 min. Although participants were not presented with the video scenes described, they were shown landscape pictures selected from the Geneva affective picture database, which had been developed to induce positive affect (Dan-Glauser & Scherer, 2011), as compensation. They were thanked, debriefed by the experimenter, and financially rewarded for their participation.

Performance in the task (successful vs. average outcome conditions). Participants were informed that their concentration ability would be assessed in terms of the number of correctly estimated trials compared to the average performance of other students in their age group (see participants and design section for details), in order to provide more insight into their concentration ability. Participants who achieved a higher performance outcome compared to other students (successful outcome) were given the following feedback: "Your concentration ability is better than the concentration ability of students in your age group as indicated by previous research. Your concentration ability is outstanding." Participants who achieved an average performance compared to other students (average outcome) read: "Your concentration ability corresponds with the concentration ability of students in your age group as indicated by previous research. Your concentration ability is average."

Measures

Manipulation of task completion (task in progress vs. completed conditions). After receiving feedback on their performance in the task, participants in the task in progress condition read:

> "The assessment of your concentration ability is not yet complete. You will now proceed to the next recognition task, a letter-recognition task. The first figure-recognition task assessed your concentration ability in the visual-figural domain, whereas the second letter-recognition task will assess your concentration ability in the visual-verbal domain."

In the task completed condition, participants were thanked for finishing the figure-recognition task and informed that the assessment of their concentration ability in the study was now complete.

Self-esteem and extraversion. We used a translated Rosenberg's (1965) 10-item Self-Esteem Scale and a 12-item extraversion scale from the German version of Costa and McCrae's (1992) Big Five Personality Inventory (Borkenau & Ostendorf, 2008). Participants were asked to indicate the extent to which they disagree or agree with each of the statements on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*; $\alpha = .80$ for self-esteem, $\alpha = .73$ for extraversion).

Pleasant experience seeking. Six descriptions of video scenes as outlined in the pretest and *Table 2.2* were presented in a randomized order. Participants were informed that from these videos they would watch one video scene for about 2 min and that the scene would be chosen depending on their ratings of the descriptions. Participants then rated how much they would like to watch each of the video scenes at that moment (1 = *not at all*; 7 = *very much*). Ratings across each of the video scenes of the same valence category (pleasant, neutral and unpleasant) were then averaged.

Positive emotions. To test whether participants who received successful outcome experienced stronger positive emotions than those who received average outcome, we assessed positive emotions in terms of four items ("happiness," "enjoyment," "pride," "relief") derived and translated from the Geneva Emotion Wheel (Scherer, 2005; Scherer, Shuman, Fontaine, & Soriano, 2013). Participants were asked to report the extent to which they had experienced each of these emotions when they received their performance feedback on a 7-point scale (1 = *not at all*; 7 = *extremely*). An average score was used as a composite of positive emotions ($\alpha = .91$).

Importance and difficulty. To test whether participants differed in their perceived importance of the entire assessment and their perceived difficulty of the cognitive ability task, participants were asked to report how important they perceived concentration ability to be for learning and how difficult they perceived the figure-recognition task to be. Participants rated each item on a 7-point scale (1 = *not at all*; 7 = *extremely*).

Results

Importance and difficulty. Univariate analyses of variance were conducted on the perceived importance of the assessment and difficulty of the figure-recognition task, with performance feedback and task completion as between-participants factors. Results showed no significant effects of outcome and task completion, and no significant interaction effects, *p*s ≥ .25, on both the perceived difficulty of the task (M = 4.42, SD = 1.56) and importance (M = 6.08, SD = 1.05).

Positive emotions. We conducted a univariate analysis of variance on the experience of positive emotions with performance outcome and task completion as between-participants factors. Results showed a significant effect of outcome, $F(1, 106) = 53.76$, $p < .001$, $\eta_p^2 = .34$. Participants with successful outcome reported a significantly stronger experience of positive emotions (M = 4.88, SD = 1.40) than participants with average outcome (M = 2.92, SD = 1.26). The effects of task completion and the interaction between task completion and outcome on the experience of positive emotions were not significant, *p*s ≥ .27.[11] Thus, these results suggest that feedback indicating above average performance in the task led to stronger positive emotions than feedback indicating average performance both when the task was in progress and completed.

Pleasant experience seeking. First, an analysis of variance on individuals' motivation to watch the video scenes was conducted, including performance outcome and task completion as the between-participants factors and valence of the video scenes as the within-participants factor. Self-esteem and extraversion were included as covariates and showed no significant effects in the analysis, *p*s ≥ .14. Results showed non-significant effects of performance outcome and task completion, *p*s ≥ .11. The effects of video valence, $F(2, 102) = 5.24$, $p = .007$, $\eta_p^2 = .09$, and of the interaction

[11] We additionally tested whether participants differed in their experience of negative emotions. Results of a univariate analysis of variance on the experience of negative emotions with outcome and task completion as between-participants factors showed that participants who achieved a successful outcome experienced significantly weaker negative emotions (M = 1.33, SD = 0.68) than participants who achieved an average outcome (M = 2.08, SD = 1.16), $p < .001$. There was no significant effect of task completion and no significant effect of the interaction between task completion and performance outcome on negative emotions, *p*s ≥ .32.

between outcome, task completion and valence, $F(2, 102) = 4.10$, $p = .019$, $\eta_p^2 = .07$, on individuals' motivation to watch the video scenes were significant. Results of Levene tests showed that the assumption of variance homogeneity was not violated by unequal cell sizes, $p = .61$, allowing for a full interpretation of the present results (Milligan, Wong, & Thompson, 1987).

In a next step, we conducted univariate analyses of variance in order to test the effects of performance outcome and task completion on the motivation to watch pleasant, neutral or unpleasant video scenes separately. With respect to the motivation to watch pleasant video scenes, results showed a non-significant effect of performance outcome, $p = .22$, and a significant effect of task completion, $F(1, 103) = 5.69$, $p = .019$, $\eta_p^2 = .05$. As expected, this effect was qualified by a significant effect of the interaction between outcome and task completion, $F(1, 103) = 5.17$, $p = .025$, $\eta_p^2 = .05$. With respect to the motivation to watch neutral and unpleasant video scenes, results of univariate analyses of variance showed neither significant main effects of outcome and task completion nor significant effects of the interactions between outcome and task completion, $ps \geq .16$. These results show that only the motivation to engage in pleasant experience varied as a function of performance outcome and task completion.[12]

Thus, we conducted post-hoc contrasts to inspect differences in individuals' motivation to watch pleasant videos across the conditions. Adjusted means and standard errors for participants' motivation to watch pleasant videos are displayed in *Figure 2.3*. In accordance with our first study hypothesis, results showed that in the task completed condition, participants who achieved a successful outcome reported significantly higher ratings for their motivation to watch pleasant videos ($M = 4.49$, $SE = .44$) compared to participants who achieved an average outcome ($M = 3.17$, $SE = .27$), $p = .013$, $d = 0.74$.

[12] In the present study, we refrained from using a comparison group who achieved a below average performance to test our hypotheses. Similar to individuals with a successful outcome in the task, these individuals may also seek pleasant experiences, however, not to maintain their positive emotional state but rather to reduce their negative emotions. Results showed that participants with below average outcome did not significantly differ in their desire to engage in a pleasant experience from participants achieving either a successful or an average outcome, both in the task in progress and completed conditions, $ps \geq .14$.

No significant effect of outcome on the motivation to watch pleasant videos was found in the task in progress-condition, $p = .47$. In support for our second study hypothesis, results showed that participants who achieved a successful outcome reported significantly lower ratings for their motivation to watch pleasant videos when the task was in progress ($M = 2.75$, $SE = .44$) than when the task was complete ($M = 4.49$, $SE = .44$), $p = .007$, $d = 0.98$. No significant difference across the task completion conditions in motivation to watch pleasant videos was found for participants who received average performance feedback, $p = .93$, indicating that the effect of task completion was specific to those participants with a successful outcome in the task.

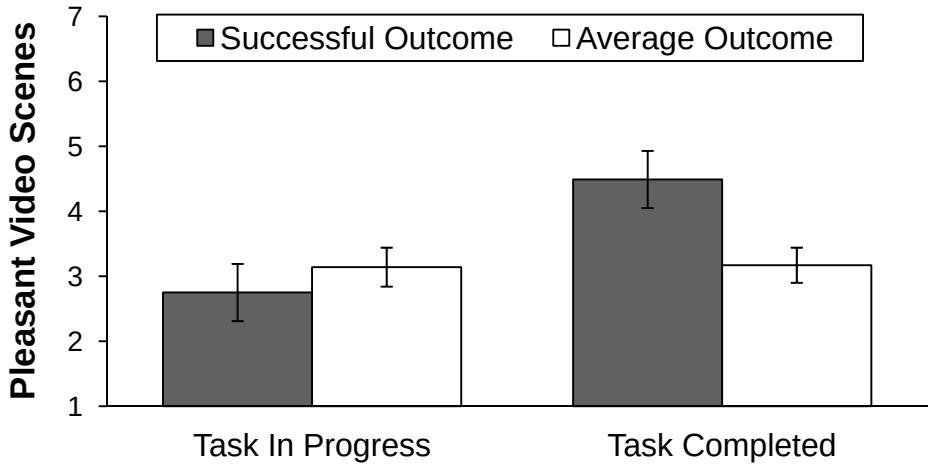

Figure 2.3: Adjusted group means and standard errors for motivation to watch pleasant videos after achieving a successful versus an average outcome in both the task in progress and task completed conditions.

Supplemental analyses. In addition, to inspect the extent of the motivation to watch pleasant videos following successful performance *compared to* less pleasant videos as a function of task completion, a univariate analysis of variance was conducted with valence as within- and task completion as between-participants factor on the motivation to watch video scenes, for participants with successful outcome only. Results showed non-significant effects of valence and task completion, $ps \geq .14$, and a significant effect of the interaction between valence and task completion, $F(2, 27) = 5.52$, $p = .01$,

η_p^2 = .29. Results of post-hoc contrasts showed that in the task completed condition, participants' motivation to watch pleasant videos following success did not significantly differ from their motivation to watch neutral videos, p =.83, but was significantly higher than their motivation to watch unpleasant video scenes ($M_{pleasant}$ = 4.49 vs. $M_{neutral}$ = 4.36 vs. $M_{unpleasant}$ = 3.12), p = .020, d_z = 0.57. In the task in progress condition, participants' motivation to watch pleasant videos was significantly lower compared to their motivation to watch neutral video scenes, p = .003, d_z = 0.72, and was lower by trend compared to their motivation to watch unpleasant video scenes ($M_{pleasant}$ = 2.75 vs. $M_{neutral}$ = 4.55 vs. $M_{unpleasant}$ = 3.71), p = .093, d_z = 0.40.

5.2.4 Discussion

The present research investigated the extent to which individuals seek pleasant experiences following a successful performance, depending on the performance situation, or in other words, whether individuals have completed performing a task or not. Results from the present study showed that a successful outcome compared to an average outcome was overall, more positively experienced. Results further showed that successful performance in the task led to a stronger desire to engage in a pleasant experience than an average outcome, but only when the task had been completed, not when the task was in progress. With respect to success, results showed that individuals reported a lower desire to engage in a pleasant experience following their successful performance when the task had not yet been completed and there was further performance to follow, as compared to when the task was completed. Together, these findings provide support for our predictions and suggest that individuals tend to not seek pleasure following successful performance when the task is not yet complete.

These findings are in line with previous research suggesting that pleasant experiences may interfere with individuals' focus on future performance and signal that the task has been finished (e.g., Gable & Harmon-Jones, 2008; Katzir et al., 2010). Although engaging in pleasant experiences may feel good and maintain individuals' positive emotions following success, individuals seem to forego such pleasant experiences for the sake of staying focused on task completion. In fact, our results further showed that individuals tended to seek less pleasant experiences following successful performance more than pleasant experiences, this is, experiences that may dampen their

existing positive emotions. Future research should investigate the underlying mechanisms of the effect of task completion on seeking pleasant experiences, the consequences of the tendency to forego pleasant experiences with respect to individuals' task focus, and further explore why this tendency is specific for successful individuals. In the present study, we provided feedback on participants' actual performance in light of previous findings suggesting that success feedback that is not contingent to one's actual performance may decrease individuals' tendency to seek rewarding experiences (e.g., Berglas & Jones, 1978; Thompson, 2004). Thus, future studies that replicate the effect of task completion on seeking pleasant experiences with manipulated feedback of the performance outcome, as well as with other achievement tasks, are warranted.

Importantly, although one might assume that individuals seek the pleasure of future successful outcomes rather than short-term pleasant experiences (Mischel & Mischel, 1983; Tamir, 2005, 2009), doing something enjoyable directly following success not only reflects the desire to give into temptation but also the desire to savor and to enjoy one's successful performance. Previous research has underscored the notion that enjoying and savoring one's positive events is highly important for individuals by contributing to life-satisfaction (Bryant, 2003; Tugade & Fredrickson, 2007). Based on this research, one might thus assume that a continuous foregoing of pleasant experiences following successes for the sake of future tasks might have also negative effects, for instance, on individuals' long-term happiness. Consideration of such negative long-term consequences in future research is particularly relevant in light of the prevalence of situations in which one's duties or tasks are succeeded by another in daily life.

Thus, the present research provides new empirical evidence showing individuals are less motivated to seek pleasant experiences following success in a task when the task is not yet complete as compared to complete, and proposes important implications with respect to both the benefits and costs of foregoing such pleasant experiences.

5.3 Integrating the Main Findings of the Second Line of Research

Within the second line of research, three studies investigated the extent to which individuals savor their positive experience and seek to engage in a pleasant experience following successful performance, depending on whether task was completed or not. The present findings showed that individuals were less likely to savor their momentary positive experience (*Hypothesis IIa*) and reported a lower desire to engage in the pleasant experience (*Hypothesis IIb*) following success in a task, specifically when the task was in progress, as compared to when individuals had finished performing. As such, these findings provide support for the hypotheses and are in line with the reasoning that, when the task is in progress, individuals may be concerned about their performance and may prefer to stay focused on task completion (e.g., Katzir et al., 2010; Markman et al., 1993; Wortman et al., 1973) rather than indulge in any positive emotions.

Researchers emphasize the importance of using multiple indices to capture the complexity of how emotions can be regulated (Campos et al., 2011). Moreover, when assessing the experience of emotions and the regulation of the experience of emotions in a certain situation, researchers prefer using behavioral, rather than self-report measures, to avoid confounds between responses (Erber et al., 2006; Tamir et al., 2008; Wood et al., 2003). Thus, in the second line of research, savoring was assessed by a direct self-report measure, the desire to indulge in a pleasant experience was evaluated using a less explicit, behavior-related assessment of individuals' motivation to engage in an activity of pleasant valence (Tamir et al., 2008; Wood et al., 2003). Indeed, the present findings showed the predicted effect of task completion on both savoring and the desire to indulge in a pleasant experience, however, the evidence was not consistent across two similar experiments (see Chapter 5.1 and 5.2). Over and above the differences between the measures used with respect to the construct of interest, there are some methodological explanations for the inconsistency found in the results. First, in the experiment presented in Chapter 5.2, the sample size of participants who achieved a successful task performance may not have been large enough (n = 36) to detect the expected effect of the task completion on savoring (p = .13). Second, in the experiment presented in Chapter 5.1, the manipulated feedback on individuals' performance in the task could have been more suspicious compared to feedback based on participants' real task performance and

might have fostered participants' reflection about their true performance result (Chapter 5.2). Thus, it cannot be ruled out that participants' motivation to engage in a rewarding experience (i.e. pleasant activity) is lower following manipulated success than following real success. Also the mere reflection of one's performance could have affected participants' responses to the less explicit assessment of the desire to engage in the activity of pleasant valence.

It is important to note that potential confounds between the emotional experience and the regulation of emotional experience in a situation reflect not only a methodical but also a broader theoretical concern in the emotion-regulation research. This research has been criticized to pinpoint the precise moment of the emotional response and the regulation of this response, and view the processes of generation and regulation of emotions as processes with defined beginnings and endings (Kappas, 2011). However, emotional responses have also self-regulation properties. For instance, one could perceive individuals' attempts to reduce the experience of negative emotions as active individuals' efforts to regulate their emotional states, but also as motivational consequences of negative emotions themselves (Kappas, 2011). Similarly, the savoring of the positive experience and seeking the pleasant experience can be viewed as individuals' active regulation efforts aiming to prolong existing positive emotions, but also as consequences of positive emotions. To what extent emotion regulation is part of the emotion, and whether it is possible to separate the regulation "of" emotions and the regulation caused "by" emotions, is a vital question that remains unsolved in the emotion-regulation research (Mesquita, & Frijda, 2011). To acknowledge this complexity, in the second line of research, I refrained from using the term "strategy" of emotion regulation which implies an active regulation effort, when speaking about savoring and the desire to engage in a pleasant experience. Instead, I opted to use a broader term, this is, individuals' responses to positive emotions, or more specifically, to successful performance which led to positive emotions.

6 General Discussion

6.1 Integrating the Main Findings of the Dissertation

Previous research has shown various personal and interpersonal benefits of both the experience and the expression of positive emotions (e.g., Fredrickson & Branigan, 2005; Reysen, 2005). Moreover, research has found that individuals typically seek to maintain positive emotions (e.g., Wegener & Petty, 1994). In the present dissertation, I hypothesized that there are certain situations in which individuals may not strive to experience and display their positive emotions. I investigated the influence that specific social and achievement situations have on the regulation of positive emotions in two lines of research.

The findings from the first line of research showed that individuals were more likely to suppress positive emotions in situations where they performed better than others, this is, outperformance situations, as compared non-outperformance situations (*Hypothesis Ia*). Moreover, the suppression of positive emotions was more positively evaluated in outperformance situations than the expression of positive emotions. More specifically, individuals who suppressed their positive emotions were perceived as more likeable and acceptable in the presence of poor-performing others, but not in the presence of others who performed equally well (*Hypothesis Ib*). These results provide support for the hypotheses and the findings extend previous research (Friedman & Miller-Herringer, 1991; Kalokerinos et al., 2014) by showing that specific characteristics of social situations may cause individuals to suppress their positive emotions, and this behavioral decision is more socially advantageous than the display of such emotions. Furthermore, the findings from the second line of research showed that when individuals had achieved success on a task, they were less likely to savor their positive experience (*Hypothesis IIa*) and were less motivated to indulge in the pleasant experience (*Hypothesis IIb*) when they had not yet completed the task, as compared to when the task was complete. These findings are in line with the hypotheses and provide new empirical evidence suggesting that although success causes positive emotions, whether individuals indulge in their positive emotions following success depends largely on the specific performance situation.

Thus, although one might assume that individuals should strive to experience and express positive emotions based on evidence highlighting the benefits thereof, the findings from both lines of research showed that in certain situations, such as when outperforming others, individuals refrained from showing their positive emotions. Moreover, individuals were also inclined not to indulge in their positive emotions following successful task accomplishment when the task was still in progress. The present findings are in line with previous research (e.g., Campos et al., 2011; Parrott, 1993; Tamir, 2009) by suggesting that individuals regulate the experience and the expression of positive emotions with respect to the characteristics of a particular context, more specifically their goals and concerns in the setting, and the demands of the situation. Indeed, results showed that individuals suppressed their positive emotions in outperformance situations in order to behave considerate in the presence of others and to avoid negative peer evaluations. Similarly, one might assume that when a task is in progress individuals may not engage in positive emotions following success, because they are concerned about their performance and want to remain focused on task completion. Moreover, the present results show that expressing positive emotions does not always lead to benefits as indicated by previous research (e.g., Reysen, 2005), and suppressing positive emotions may be more beneficial in certain situations, such as in the presence of worse-off others. Together, in line with the main prediction of the present dissertation, these findings show that there are certain situations in which individuals indeed do not strive to experience and express their positive emotions. The strengths and limitations of the present studies, as well as the implications for future research, have been discussed in previous Chapters 4 and 5, and will be addressed in the following Chapters 6.2 and 6.3 from a broader perspective.

6.2 Strengths and Limitations

Overall, findings from the present dissertation addressed an underexplored domain within emotion-regulation research by providing new insights into how people regulate their positive emotions. Moreover, in contrast to the emphasis in previous research on the benefits of experiencing and expressing positive, the present study took a rather different perspective. Drawing on previous research suggesting how individuals regulate their emotions to be largely determined by the particular context (Campos et al.,

2011; Parrott, 1993; Tamir, 2009), the effects of situational factors were examined on how people regulate their positive emotions. More specifically, I questioned if there are situations where individuals would not strive to experience and express positive emotions. Examining this question is relevant, not only because it provides a novel perspective, but also because it allows for a better understanding of how individuals "adapt" their regulation attempts to specific situational demands. In addition, important implications with respect to the consequences of this adaptation may be revealed upon further exploration. To date, only few studies have examined the effect of situational variables on the regulation of positive emotions (e.g., Erber et al., 1996; Friedman & Miller-Herringer, 1991). The present work contributes in a unique way to the limited research on this topic, by following two lines of research in which the role of positive emotions in both social and achievement situations was investigated.

To examine how individuals regulate positive emotions in these situations, experimental studies were conducted in both laboratory and field settings. Also, various populations were investigated, such as high-school students, university students, and soccer players. Given that existing experimental research on emotion regulation has been criticized to examine emotion-regulation processes in laboratories isolated from individuals' natural contexts (Campos et al., 2011), looking at these processes in field settings is particularly relevant. Although field studies may have associated costs with respect to internal validity, since there was little control over the variables that can consequently affect the outcome of interest, these studies strengthen the generalizability and the ecological validity of the results. Using both experimental designs in field settings and investigating various populations strengthens the practical relevance of the present findings by giving insights into how people regulate positive emotions in different real-life contexts. Although previous research has shown that incidents where individuals regulate their negative emotions are more prominent than cases where individuals regulate their positive emotions (Gross et al., 2006), the present research does not seem to address very exclusive phenomena. Rather, it shows fairly typical situations that can be found at school, in sports, and at one's job. This issue underscores the importance for future investigations to focus, not only on processes involving the regulation of negative emotions, but also consider how and in which situations individuals deal with their positive emotions.

However, using self-report measures is considered to be a potential limitation of the present study. Although using self-report is less expensive as compared to behavioral or observational methods, responses attained by self-report measures depend on individuals' explicit knowledge about their emotional processes and subjective believes (e.g., Goetz, Hall, Frenzel, & Pekrun, 2006), and may be confounded with other self-report assessments (e.g., Tamir et al., 2008). To date, most of the research examining individuals' spontaneous attempts to regulate emotions relies on self-report measures that primarily assess the habitual use of emotion-regulation strategies (Gross & John, 2003; Parkinson & Totterdell, 1999). In the first line of research, the extent to which individuals suppressed their positive emotions was evaluated using an adaptive version of a widely established habitual suppression measure (Gross & John, 2003). Instead of using self-report, one could also videotape participants and code their facial expressions, that is, evaluate whether participants display behavioral cues which are associated with the expression or suppression of positive emotions (e.g., Ekman & Friesen, 1974). In the second line of research, not only was a more direct approach taken by using self-report (i.e. of savoring), but also a less explicit behavior-related measure was introduced (i.e. of pleasant experience seeking) to capture individuals' attempts and motivation to prolong their positive emotions. It would be of interest to consider other methods to assess individuals' savoring of momentary positive experiences. For example, recent research suggests that since savoring is described as taking the time to appreciate a momentary positive experience, it can be evaluated by observing the amount of time individuals spend in that moment (Quoidbach, Dunn, Hansenne, & Bustin, 2015). Moreover, a rather different assessment method would entail studying individuals' implicit regulation of emotions. Following this approach one might assess how individuals shift their attention to emotional stimuli after receiving performance feedback that are presented subliminally (e.g., Rothermund, 2003; Rothermund, Voss, & Wentura, 2008).

6.3 Implications

Together, the findings of the present dissertation show that individuals regulate the experience and the expression of positive emotions with respect to the characteristics of a particular situation. Future research is important to examine how individuals regulate their positive emotions, the effects of situational factors on the regulation of positive

emotions, the underlying mechanisms of these effects, and the consequences of the situation-dependent emotion regulation. The present study provides many ideas that can be used and elaborated upon in future investigations.

For instance, one might assume that cultural variables can influence how individuals suppress or express positive emotions in social settings. Previous findings suggest that individuals from Eastern societies (i.e., Asian countries) might suppress their emotions more often and that suppressing these emotions is more socially and positively evaluated by others, as compared to individuals living in Western societies (e.g., Butler, Lee, & Gross, 2007; Miyamoto & Ma, 2011). As such, it would be of interest to examine how cultural factors influence the use and the consequences of suppressing and expressing of positive emotions in outperformance situations. Furthermore, it would be of interest to examine whether the negative evaluations of the outperforming person, who expresses positive emotions following successful performance, may be influenced by the type of the success. For example, one might assume that these negative social consequences may be mitigated when success has been attained after a long streak of bad luck. In such "outperformance" situations, expressing one's positive emotions might be accepted by others. However, future investigations may not only consider outperformance situations, but also effects of other specific situational factors in social settings. For example, it would be of interest to study how closeness to others shapes the use and the consequences of the suppression and the expression of one's positive emotions in social situations.

Moreover, given that the effect of task completion on savoring a positive experience and a desire to engage in a pleasant experience has not yet been addressed in previous research, future studies may explore this effect in further detail. Importantly, studies could specify if savoring is reduced merely due to individuals' focus on future tasks, as opposed to being in the here-and-now, or as a consequence of the specific status of the outcome (intermediate as opposed to final success). The present findings suggest that both individuals' focus on future tasks and the status of the successful outcome might have impact on savoring of positive experiences following success. Moreover, it would also be of interest to explore the reasons for why the effect of task completion is specific to successful individuals, and to examine if individuals are "not able" or "do not

want" to savor their positive experience. For example, one could examine how individuals' importance of their performance on a task influences savoring and if individuals who highly value their achievements are less able to savor their success during task completion compared to individuals who value their achievements low.

Lastly, when examining the effects of situational factors on positive emotion regulation, global approaches to studying regulation of clusters of positive emotions may be complemented by more specific approaches to studying the regulation of different discrete positive emotions. For instance, previous research has suggested that although pleasure is associated with low tendencies to move towards a goal (Carver, 2003), positive emotions such as pride (Katzir et al., 2010; Williams & DeSteno, 2008), and enthusiasm (Gable & Harmon-Jones, 2008), are proposed to foster the motivation to approach a goal. As such, although individuals may express a lower desire to engage in a pleasant experience when the task is in progress, than after the task has been completed, it would be important to investigate this tendency with respect to other positive experiences.

6.3.1 Consequences of Situation-Dependent Regulation of Positive Emotions

The results from the first line of research demonstrate the benefits of using suppression as a strategy in outperformance situations, specifically showing that those who suppress, rather than express, their positive emotions gain more positive evaluations from their peers. This finding is particularly remarkable in light of previous studies demonstrating the interpersonal benefits of the expression of positive emotions (Reysen, 2005) and negative short- and long-term consequences of suppression in social settings (Butler et al., 2003; Richards, Butler, & Gross, 2003). This finding highlights the impact of the specific situation on the effects of emotion-regulation strategies. Indeed, previous research has emphasized the importance of evaluating the effectiveness of emotion-regulation strategies in light of the given context in which individuals regulate their emotions (Campos et al., 2011; Tamir, 2009). Undeniably, when individuals attempt to regulate their emotions with respect to the demands of a particular situation and their situation-specific goals, one could conclude that these individuals' efforts may lead to benefits by helping individuals to meet the demands of a situation and to reach their specific goals. Moreover, such an ability to use different emotion-regulation strategies in

different situations in a flexible way might have benefits for individuals by fostering their adaption to different conditions in life (Bonanno et al., 2004; Cheng, 2001, 2003).

However, whether individuals' reduced savoring responses and motivation to engage in pleasant experiences following success are truly beneficial for individuals during the task completion or if these responses may be primarily detrimental for individuals, is an important question that should be considered in future research. Previous studies have found that savoring is important for individuals' long-term well-being (Bryant, 2003; Langston, 1994). Thus, if an individual reduces their savoring of success in situations where there is a task in progress, over time these responses might have detrimental effects on life-satisfaction and happiness (Sheldon & Lyubomirsky, 2012). Importantly, also suppressing one's positive emotions in outperformance situations might have negative personal consequences for individuals. Previous studies have demonstrated that suppression of emotions is a cognitively effortful emotion-regulation strategy (e.g., Richards et al, 2003) and that a habitual use of suppression is associated with lower positive affect and life-satisfaction (e.g., Gross & John, 2003). Negative relations with well-being were also found for individuals who less frequently shared daily positive events and positive feelings with others (Langston, 1994; Quoidbach et al., 2010). As such, it is possible that suppressing positive emotions after doing well in the presence of poorer-performing others may also have negative effects for outperformers, such as, by lowering enjoyment of their successes. Negative consequences may be also anticipated for individuals' motivation for academic success if displays of the emotional rewards thereof are continually suppressed for the sake of poorer-performing others, which is particularly costly in educational contexts. Thus, future research should look at both the benefits of the situation-dependent emotion regulation, but also take potential negative effects into account, such as negative personal effects of this emotion regulation.

6.3.2 Outlook: "Positive Interventions"

Importantly, when taking the potential long-term negative personal consequences into account, the question may also arise as to how one can prevent individuals from suppressing their positive emotions and facilitate savoring and enjoying of interim successes during one's task completion. Researchers only recently began to discuss

positive interventions from an emotion-regulation perspective in detail, by looking at how individuals can regulate their positive emotions and which interventions may help to improve these regulation abilities with respect to better mental health outcomes (Quoidbach, Mikolajczak, & Gross, 2015). The present evidence suggests that when considering such possible interventions, it is also important to look at the effects of contextual factors on the regulation of positive emotions.

For instance, when taking the effect of the outperformance situation into account, one might assume that possible concerns of students with good achievements about negative evaluations from peers might be fostered by an emphasis on their good achievements in the presence of peers (Exline, Single, & Lobel, 2004). An emphasis on students' achievement differences in public, such as in classroom settings might thus enhance not only apprehensions of students who performed poorly, but also lead students with good achievements to hide their positive emotions about their successful performances. Teachers may prefer to refrain from comparing students' achievements in public, for example by giving private feedback in classroom settings and accentuating students' individual development of performance. Also, teachers can make an effort to avoid making students compete with one another.

Moreover, based on the present findings, one might further conclude that a focus on one's present successful outcomes rather than a focus on upcoming tasks may facilitate one's full enjoyment of success experiences. Indeed, previous research has emphasized the importance of the ability to direct one's attention towards positive experiences occurring in the present moment, as individuals' who possess this ability may be more resilient against distress and possible negative future events (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Geschwind et al., 2011). A possible way to promote a deliberate focus on one's present successful outcomes is by enhancing one's mindfulness concerning the fleeting nature of these positive moments (e.g., Erisman & Roemer, 2010), taking "time outs" from everyday business (e.g., Bryant & Veroff, 2007), and by attempting to appreciate every success, also if it is one segment of a larger goal in life.

6.4 Conclusion

Despite the personal and interpersonal benefits of both the experience and the expression of positive emotions (e.g., Fredrickson & Branigan, 2005; Reysen, 2005), the present dissertation showed that in outperformance situations individuals tend to suppress the expression of positive emotions. Furthermore, individuals tend not to indulge in positive experiences when their task is in progress, despite their previous success in the task. Together, these findings suggest that individuals regulate positive emotions with respect to specific characteristics of a particular situation. Moreover, individuals benefit from this situation-dependent regulation, for instance they are positively evaluated by others when they suppress positive emotions in outperformance situations. The present findings suggest that people may encounter such situations in daily life, such as at school, during sports, and at work. This issue underscores the relevance of investigating how individuals regulate their positive emotions and the effects of the specific context on this emotion regulation in future research. Future research should also examine the benefits of this situation-dependent regulation of positive emotions in further detail as well as consider its possible negative consequences for long-term well-being. Taken together, the results of the present dissertation provide new insights into processes involving positive emotion regulation, which have received only little attention since the explosion of the emotion-regulation research in the last decade.

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Index of Figures

Index of Tables