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On Regulating Emotion Expression in Social Interaction: the Interplay of Goal Attainment, Regulatory Effort, and Well-Being

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by

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Elena Suen-Fei WONG

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FACULTÉ DES SCIENCES ÉCONOMIQUES

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Neuchâtel, le 14 mars 2016

La doyenne

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List of Articles[1,2]

Study 1, Manuscript

Wong, E., Tschan, F., Stalder, B., & Semmer, N. K. (In Preparation). Examining the link between congruence and regulation of emotion expression to regulatory effort- a polynomial regression investigation.

Study 2, Published Article

Wong, E., Tschan, F., Messerli, L., & Semmer, N. K. (2013). Expressing and amplifying positive emotions facilitate goal attainment in workplace interactions. *Frontiers in psychology*, *4*.

Study 3, Manuscript

Wong, E., Tschan, F., & Semmer, N. K. (In Peer Review, Submitted Revision). Effort in emotion work and well-being: the role of goal attainment.

[1]In this dissertation, I refer to these article and manuscripts according to their specific logical flow of order. Hence, I connotate them as Study 1, 2 and 3 or Research Paper 1, 2 and 3 in the text to enhance clarity.

[2]The complete thesis is archived at the « Service de coordination des bibliothèques » at the University of Neuchâtel.

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I would like to also note here, that from conceptualization to execution, as well as to the write-up of the studies, the dissertation is indebted to my two dedicated professors. Throughout the thesis, the use of "*we*" refers to research and line of reasoning that we, Franziska Tschan, Norbert K. Semmer and I, worked on together. On the other hand, the use of "*I*", refers to the context in which I explain my reasoning and arguments.

Table of Contents

List of Tables

PAGE

List of Figures

PAGE

Umbrella

Paper 1

Paper 2

Paper 3

Résumé (Abstract)

Expressing emotions carries important social functions in our daily lives. Although research has demonstrated that the regulation of emotion expression induces discrepancies and could be effortful and detrimental to individual well-being; possible beneficial outcomes, such as goal attainment, could ensue from expressing appropriate emotions during social encounters. This could, in turn, influence well-being outcomes. Using an event-sampling methodology (ESM) of studying one week of naturally-occurring social encounters (more than 3000 interactions collected) reported by 115 Swiss participants, this thesis investigated several related phenomena under the domain of the social function of emotion: what mechanisms of display regulation of emotion are associated with regulatory effort during daily social encounters (Study 1); whether positive emotion expression and its amplification predicts attaining goals in the workplace, and how these results could differ, depending on the interaction partner (superior vs colleague) with whom the person is interacting (Study 2). Lastly, whether success in goal attainment could reduce the negative impact, on well-being associated with regulatory effort (Study 3). We performed multilevel and polynomial regression whenever appropriate in our analyses. Variables at the personal level, such as age, gender and personality (big five) were controlled in all of our analyses. Results, as well as implications for any future research and practice, are discussed.

Keywords: Emotion Regulation, Emotion Work, Goal Attainment, Regulatory Effort, Well-Being, Surface Acting, Positive Expression, Social Interactions

Mots-clés: régulation émotionnelle, travail émotionnel, l'atteinte de l'objectif, l'effort de réglementation de l'émotion, bien-être, surface acting, expression positive, interaction sociale

Statement of Research

> Aristotle stated, "*Every healthy human being is always or almost always trying to emote and act with reason and in accordance with virtues, whether he realizes this or not; he is trying to do this just as long as he thinks, feels and does in an ordinary way"*
> (Chew, 2009, p. 6).

We laugh, we cry, we ……..[3] We are born to be filled with emotions. Our momentary emotion experience is indistinguishable from the quality of our daily lives. Emotion not only influence how we feel, but also how we think, and how we behave. The subject of emotion and its regulation has been the subject of discourse since antiquity. We regulate our emotion perpetually in our everyday lives, and we do so in relation to the specific situational environment (Campos, Frankel, & Camras, 2004).

The word, "*emotion*", originated from the *latin* word *emovere*, the "*e*" refers to "*out*", whereas "*movere*" refers "*to move*" (Dictionary, 1989; Gould, 2013). One possible interpretation of these two components of the word is the recognition of the two core facets of emotion: the inner feeling, which could then "*move out*", and evoke as the outer expression for others to read (e.g. Van Kleef, 2010). The subject matter of this dissertation concerns the study of emotion regulation (ER) during interpersonal encounters. Studying the distinct yet closely related components of emotion, inner emotion felt and outer emotion shown - is one of the focal points in this dissertation, which allows us to expand and cultivate our understanding of ER in social settings.

Emotion regulation (ER) in an interpersonal context carries strong implications for individuals' daily functioning and mental health (John & Gross, 2004). With decades of research before us, the study of ER becomes vast and extensive. From an enormous body of knowledge, I have narrowed down my research interest into a precise set of research questions. The particular set of questions I chose to focus on in this dissertation are: Why do we need to regulate our emotion when interacting with others? How do we engage in ER in a social context? What type(s) of ER strategy could help us to reach our goals during social interactions at work[4], and with whom would such strategy be effective? What are the implications of ER to our well-being? What factor(s) might influence this?

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[3]Inspired by the title of Barry, Fulmer, and Van Kleef (2004).
[4]While Study 2 concerns interactions at work specifically, Study 1 and 3 examine social interactions in general (i.e. social encounters in both private and work lives setting)

Research informed us that emotion regulation, especially in the case of surface acting (to regulate one's emotion display in a social setting) requires personal effort, and thus, is detrimental to individual well-being (Brotheridge & Grandey, 2002; Grandey, 2003; Holman, Chissick, & Totterdell, 2002; Zapf, 2002). Nevertheless, this known relationship between regulation efforts and well-being might not be fully depicted without accounting for other crucial factors that could, likewise, influence individual well-being. For instance, reaching goal(s) has been argued to be the ultimate purpose of emotion regulation (Campos et al., 2004; Thompson, 1994), and could be beneficial for our well-being. Yet, little research on emotion regulation has accounted for the role of goal attainment. Therefore, we think that there is an important need to investigate whether successful goal attainment could buffer the relationship between emotion regulatory effort and individual's well-being during social interactions (Study 3). In addition to the above research theme, using a comprehensive polynomial regression of analyzing both 'emotion felt' and 'emotion shown', we seek a better understanding of what particular mechanism(s) of response focused emotion regulation might be associated with regulatory effort (Study 1). Moreover, as mentioned, one of the core functions of emotion regulation is to help people achieve goals. Given the ample research on positive psychology, we have reasons to believe that positive expression and its amplification could facilitate goal attainment in the workplace (Study 2). From the evidence we gathered, empirical research is lacking in this area. Additionally, during social interactions at work, the effect could differ when interacting with different work partners, such as when interacting with superiors compared to interacting with colleagues.

To extenuate and to clarify the objectives of the three empirical papers in the thesis, I summarized the specific research objectives of each article below.

The *first* research paper (manuscript in preparation) investigated the types of response-focused emotion regulation mechanisms that are associated with more regulatory effort during social interactions in private and in work life settings, by utilizing polynomial and multilevel regression as the main tool of analysis. At the same time, while investigating the emotion regulation mechanisms involved, we also examined whether congruent emotions (authentic emotion shown when felt) could be linked to effort.

The *second* research paper (published article) investigated whether positive emotion expression and its amplification would help individuals attain goals in workplace interactions. In addition, given the different roles and status that different work partner(s) take on at work, we

also investigated how amplification of positive emotion for attaining goals might only be effective depending on whether individuals are interacting with their boss or their colleagues. As far as we know, this could be the first empirical study that has investigated the effect of positive expression and its amplification on goal attainment in the workplace.

As a closely related subject, the *third* research paper (under peer review, second review completed) investigated how high regulatory effort would lower one's well-being after social interactions. This observation is consistent with the current literature. What intrigued us and is missing from the current research, is how reaching one's goal(s) in social interaction could potentially be beneficial to well-being and thus, buffering the negative consequences of regulatory effort to well-being. This study considered goal attainment as a crucial factor when considering the cost and benefits of response focused emotion regulation (otherwise known as emotion work).

Scope of Research

- Study 1. Examining the Link between Congruence and Regulation of Emotion Expression to Regulatory Effort- a Polynomial Regression Investigation
- Study 2. Expressing and Amplifying Positive Emotions Facilitate Goal Attainment in Workplace Interactions
- Study 3. Effort in Emotion Work and Well-Being: The Role of Goal Attainment

Overview of the Studies in the Dissertation

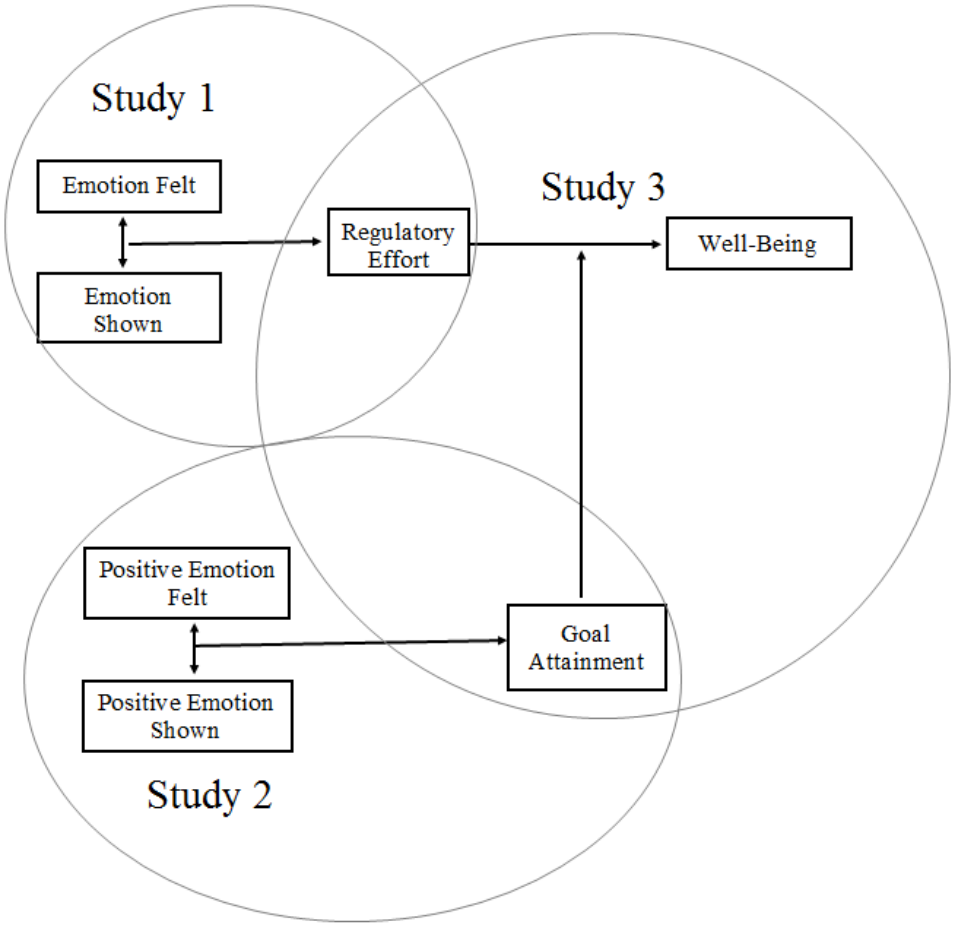

Figure 1. This figure illustrates core concepts of the three studies in the dissertation.

Overview of the Dissertation

This dissertation consists of three research articles and an umbrella, which contains an introduction and discussion. The umbrella serves to provide the audience with a broad general literature review and theoretical background, as well as to explain the rationale and necessity in conducting these three closely related research studies. The choice of producing a publication-based dissertation implies that redundancies would be present at times in the umbrella (Chapter 1, 2, 3, 7) and in the three studies (Chapter 4, 5, 6).

The dissertation is structured as follows:

Chapter 1 is an umbrella literature review that provides a general background on the subject investigated in our research. First, I provide the definition of emotion, its core features, as well as the definition and the process model of emotion regulation (ER). Then, I discuss reasons people perform regulation of emotion intrapersonally and interpersonally. This discussion serves as a prelude to what is essentially the central tenet of the dissertation-investigations pertaining to the social interpersonal perspective on emotion regulation of expression.

As part of the broader umbrella section, Chapter 2 presents and discusses the core themes, which serve to provide more overview on the research studies in the dissertation. These core conceptual frameworks are: a novice analysis in examining traditional views of emotion regulation (Study 1), reaching goals in social interactions: moving towards the functional perspective of emotion regulation (Study 2), and a new perspective: the role of goal attainment in emotion regulation and well-being (Study 3). I have chosen to focus on these specific core research themes to present how they, as a whole, would bring new insights to the existing literature on emotion work.

Chapter 3 presents the justification of research, which includes several limitations, issues or missing elements identified from literature in the particular line of research on emotion regulation in social settings. Hence, we propose some insights and methodological solutions implemented by our research to tackle each of these problematic areas.

Chapter 4 is an empirical research report (Study 1), where we examine the type of emotion regulations (response-focused) and congruence emotions in real-life social interactions linked to regulatory effort, using a comprehensive polynomial multilevel analysis technique.

Chapter 5 is a published study (Study 2), focusing on how positive expression and its

amplification could lead to goal attainment in workplace interactions. While authentic positive emotion is linked to higher goal attainment, when people interact with both their superiors and their colleagues, the effect of amplification of positive expression is particularly apparent when the individual is interacting with a boss.

Chapter 6 is a research paper (Study 3) on how the success in goal attainment could moderate, and specifically, alleviate the lowered well-being, caused by regulation effort when people manage their emotion expression during interactions with others. This research shows how outcomes on the cost and benefits of emotion regulation could differ when we take the crucial factor of goal attainment into account.

Chapter 7 offers an umbrella discussion in which we summarize all of the findings from the three studies, draw conclusions and implications for both research and practice, and outline how our research could contribute, by tackling some of the existing issues we identified in Chapter 3. Furthermore, future directions and limitations will be discussed. Lastly, a final remark is provided to draw a conclusion to the dissertation.

Chapter 1

Definitions, Background of Research

To start, I will lay out some definitions, research background and core concepts concerning the regulation of emotion expression in social contexts. This chapter unfolds as follows: I will first provide the definition of emotion, affect and mood; then, I will present some core features of emotion. Subsequently, I will present the process model of emotion regulation and discuss how it relates to deep acting and surface acting. Lastly, I will present some emotion regulation goals identified from the literature review, which are classified into both intrapersonal and interpersonal emotion regulatory goals. Intrapersonal emotion regulatory goals concern hedonistic and instrumental approaches, while interpersonal emotion regulatory goals[5] primarily concern feeling rules, emotion work (surface acting and deep acting), display rules and the more recent focus on the social function of emotion. This background information will set the stage for the core themes of our research studies in which I will discuss in the conceptual framework of the three studies in Chapter 2.

[5] Note that some of the properties of these abovementioned interpersonal approaches on emotion regulation overlap substantially. That is, they do differentiate, but they are not mutually exclusive.

1.1 Defining Emotion

"The word emotion has no generally accepted definition."
(Izard, 2010, p. 370)

Whether we choose it or not, we are constantly bombarded by emotion. Emotion infuses all dimensions of our everyday lives. Emotion guides us through our own inner psyche and helps us communicate with others. Emotion helps us move towards and achieve our goals. Emotion is prominent as it infiltrates our friendships, romantic encounters, and professional work lives. The complex, yet unpredictable nature of emotion has triggered tremendous intellectual curiosity among the scientific community. It has been generally recognized that the study of emotion and emotion regulation has flourished (Gross, 2014), one might assume that defining "emotion" should be relatively easy. Yet, it is not. Psychologists found it daunting to define emotion decades ago, "*everyone except the psychologist knows what emotion is…..*" (Young, 1973), there is still a lack of consensus on what the precise definition of emotion is to date (Izard, 2010). The challenge in seeking a single precise definition of emotion is that different schools of researchers defined and examined emotion in utterly distinct perspectives, depending on the broader contexts in which they are referring to (Gross & Barrett, 2011). In this thesis, I focus on the study of emotion and emotion regulation in a social setting. As my research themes are heavily based on the social functional approach, I have adopted the definition proposed by Lazarus (1991) to guide the studies. *Emotion* is rather directed and most likely triggered by specific events. They are intense, short-lived, fleeting episodes (seconds or minutes) that are rapidly changing, and are generally accompanied by expressions (Gross, 1999). Examples of emotion are anger, love, fear, jealousy, surprise and happiness.

We now know, in theory, emotion differs from related terminologies of mood or affect; yet, these associated terms are often used interchangeably (Batson, Shaw, & Oleson, 1992). Mood is a rather diffused affective state that is quite long lasting in terms of time frame (hours to days), and is usually classified according to positive and negative dimensions, such as being pleasant or being unpleasant (Nezlek & Kuppens, 2008). One noticeable feature of mood is that, unlike emotion, it is non-directed and does not need to be triggered by a particular event or situation (Batson et al., 1992). Affect, on the other hand, is a broader term that encompasses both mood and emotion

(George, 1996). This term could range from describing a general sense of feeling one is having or referring to the trait disposition tendency of a person, such as describing a positive upbeat person versus a negative downer (Barsade & Gibson, 2007).

1.2 Core Features of Emotion

For decades, theorists have been discussing, identifying and consolidating some crucial features of emotion. Gross and Thompson (2007) summed three core features of emotion which further allow a better understanding of the essential characteristics that define the term "*emotion*". The first feature concerns how emotion is formed as a response to how an individual evaluates the situation in relevance to his or her goal(s) (Lazarus, 1991; Scherer, Schorr, & Johnstone, 2001). The second feature concerns the "*action tendencies*" of emotion (Frijda, 1986), in which emotion provides individuals with more than just a feeling, but also with a momentum, an urgency or an impulse to *act* upon something, generally towards a goal. The third feature concerns the "*control precedence*" nature of emotion (Frijda, 1986), where an emotion experience imperatively captures our attention and potentially overrides, interrupts or competes with our current plan or course of action. This control precedence property of emotion could be rather forceful, and it could change how we think, act and behave. These core features carry important implications concerning the understanding of the various functions of emotion regulation in intrapersonal and interpersonal contexts. For example, these features of emotion could help us in the everyday pursuit of our goal- a core concept of the thesis, which I will discuss later in the chapter.

1.3 Definition of Emotion Regulation

> Freud once said, "*The regulation of emotion is no longer simply desirable. It is absolutely necessary for daily functioning. This is true in situations ranging from very public to the very private. If dysregulated, it is clear that something is very wrong.*" (Gross & Muñoz, 1995, p. 154)

Similar to the term emotion, the term emotion regulation could mean different things to different people. Nevertheless, like most emotion researchers, we have adopted the Gross process model of emotion (1998) as the general framework to study emotion regulation. This model defines emotion regulation as "*the processes by which individuals influence which*

emotions they have, when they have them, and how they experience and express these emotions," (Gross, 1998, p. 275). These processes to regulate emotion could be "*automatic or controlled, conscious or unconscious,*" (Gross, Richards, & John, 2006, p. 14) in which the individual performs an up-regulation or down-regulation of positive and negative emotions (Parrott, 1993), in an intrapersonal or interpersonal context.

1.4 Process Model of Emotion Regulation

Building upon the core features of emotion, the process of emotion regulation (Gross, 1998) is regarded as a "*person-situation transaction*" (Lazarus, 1991). This view considers emotion as it is derived from the evaluation between one's goal and the situations in the environment. The process model also expanded William James (1884) perspective on considering emotion as malleable, meaning that emotion responses could be modulated and unfolded in a variety of ways in an ongoing manner. Gross (1998) characterized emotion regulation as a multi-componential process that unfolds over time. In particular, he outlined two broader forms of emotion regulation in his model.

The two mechanisms are *antecedent-focused* and *response-focused* emotion regulation. The former takes place before the emotion is generated whereas the latter is performed after the emotion experience has occurred. Antecedent-focused emotion regulation encompasses the first four points of ER known as *situation selection, situation modification, attention deployment* and *cognitive change.* Response-focused emotion regulation encompasses the last point of emotion regulation known as *response modulation.* Refer to Figure 2 for an illustration of the model.

The first point of emotion regulation, *situation selection*, refers to how we might choose or avoid situation(s) in which we could be situated, while we anticipate how we might feel about that situation. We might choose to attend or avoid a friend's gathering or a family reunion, for instance, based on a forecast of our affective experience in relation to these situations.

The second point of emotion regulation involves *situation modification*. This refers to how we might change or modify existing situations to alter the emotional consequences that the situation might trigger. Examples are how we might lighten up someone's mood by telling a joke or dim the lighting for a romantic dinner (Gross, 2009).

The third point of emotion regulation is *attention deployment*. It refers to how we might influence emotion outcome by directing our attention in the given situation, meaning that we

could mentally select which situational aspects to focus on. This differs from the first two points of emotion regulation, where one might select or modify the external situations. Examples of some possible attention deployment strategies are distraction, concentration and rumination.

The fourth point of emotion regulation is *cognitive appraisal*. It refers to the stage where we can modify the way we think and evaluate the given circumstances before emotion is generated. It involves changing the meaning or the interpretation of the situation in order to control the consequent emotion that will arise. For instance, we might attribute the reason(s) of why our acquaintance ignored us as the result of their preoccupation of their own problems they encountered (Gross, 2009).

The first four points of emotion regulation processes belong to *antecedent-focused ER*, which occurs before the emotion is generated. The fifth and last point of emotion regulation belongs to *response-focused ER*, also known as response modulation, which happens after the emotion has been initiated. Response modulation refers to how we modulate our expressive responses of the emotion, such as hiding our anger when dealing with our superior. One important distinction of how response modulation differs from the other processes is that it deals with the regulation of emotion expression (display) whereas the previous four points of regulation deal with regulation of emotion experienced (felt).

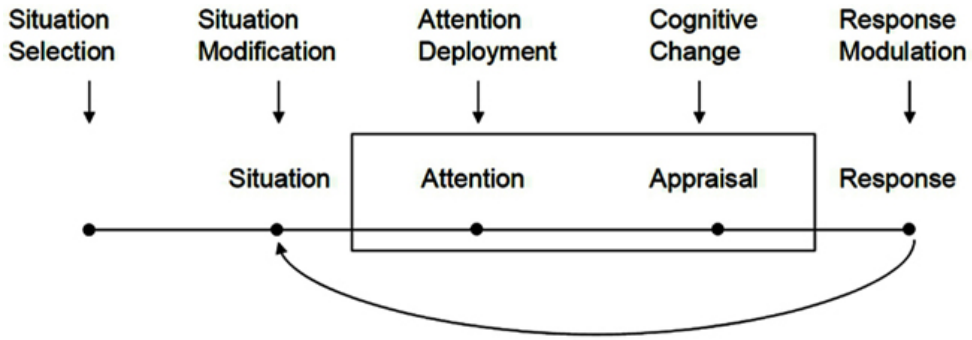

Figure 2. Basic process model of emotion regulation (Gross & Barrett, 2011, p. 12).

Upon introducing the Gross model of ER, I would like to point out that one of the core

issues we examine in this dissertation, is the interactive nature and the distinctions between *emotion felt (experienced)* and *emotion shown (expressed)*[6] (Rafaeli, Semmer, & Tschan, 2009). Though one could argue that these two dimensions of emotions are similar and they overlap substantially, they do and indeed could differ, especially in circumstances of response focused modulation (also known as surface acting, which I will explain later in the chapter).

1.5 Emotion Regulation Goals

People regulate their emotion for a wide range of reasons, and these reasons could be intrapersonal and/or interpersonal in nature.

1.5.1 Intrapersonal emotion regulation goals.

Within the intrapersonal context of emotion regulation (i.e. to regulate emotion experience for and within oneself), the objectives of emotion regulation could be hedonistic or non-hedonistic (Mauss & Tamir, 2014). The hedonistic approach explains that we tend to "*avoid pain and seek pleasure*" (Gross, 1998, p. 286). Based on this broad assumption, we tend to increase (upregulate) positive emotion, such as happiness, and decrease (downregulate) negative emotion, such as anger and sadness. This general hedonistic tendency explains why we prefer immediate pleasant emotion when we regulate emotion.

Complementary to the hedonistic goals of emotion regulation, the non-hedonistic goals of emotion regulation concern goals to regulate emotion other than just to feel pleasant. In such cases, the motivation to perform ER could be largely explained by the benefits associated with how it might help fulfill situational demands and attain instrumental goals. Such an instrumental approach of emotion has only raised more attention during the last decade (Tamir, 2005; Tamir, Chiu, & Gross, 2007; Tamir, Mitchell, & Gross, 2008). The main argument in this approach is that people might not necessarily always seek pleasant emotion across situations (hedonistic approach), but rather they might choose to feel or experience an emotion that could help them to achieve an instrumental goal in a particular context. For instance, Tamir et al. (2008) tested how

[6] For instance, in our Study 1, by employing polynomial regression, we were able to treat these two dimensions of emotion as independent variables to see how they interact with each other to influence effort spent in emotion regulation. This is essentially studying response-focused modulation (surface acting) by using both emotion felt and emotion shown as independent variables. Similarly, in Study 2, we examine how positive emotion felt and positive emotion shown could interact with each other (i.e., regulation of positive emotion expression) to influence goal attainment. More discussion on the studying of the distinctive nature of emotion felt and emotion shown will be elaborated in Chapter 3, Issue 1.

participants might rather choose to feel angry before an expected confrontational situation because of how participants believe that it could better their performance. In another study (Tamir & Ford, 2009), participants would choose to be afraid (feel fear) instead of excitement or anger when they were about to pursue an avoidance goal (such as avoiding being killed by aliens in a computer game). This instrumental approach of emotion implies that people would choose to feel their perceived useful emotion that is adaptive to the situation to achieve their goal(s).

1.5.2. Interpersonal emotion regulatory goals.

Why do people regulate their emotion when around others? Some emotion researchers and sociologists would say that people regulate their emotion in interpersonal contexts due to social and/or organizational demands. They are conceptualized as feeling rules, display rules and emotion work. Typically, these perspectives consider interpersonal emotion regulation as an imposed requirement on individuals to perform ER depending on what is appropriate in the given context(s). On the contrary, some take on a quite different approach, known as the social functional approach of emotion, which portrays emotion expression as a means to influence others.

1.5.2.1 Feeling rules, emotion work and display rules.

Emotion regulation enables individuals to satisfy situational requirements from society and organizations (Goffman, 1959; Hochschild, 1983). The perspective highlights how the social imposed need to manage emotions would induce a psychological cost and is effortful to individuals.

Display rule (Ekman & Friesen, 1969) dictates what *type* of emotion is appropriate and to what *degree* one should express such emotion to *display* in the given situational contexts guided by social conventions, such as norms and expectations, cultural practices and organization rules. Because display rule deals with emotion display, it is expected that if the appropriate emotions that should be displayed in the given circumstance are not being felt genuinely, people might undertake different regulation strategies to conform to these rules (Diefendorff & Greguras, 2009; Ekman, 1984). According to research, we have been learning these display rules through the process of socialization since early infancy (Malatesta & Haviland, 1982). Some classic examples of display rule behaviors posed by the original authors (Ekman & Friesen, 2003) are how winners of the beauty contest could "*burst into tears*" (p.138) when the final result is announced, but the losers are generally not expected to cry and, instead, should show some amount of happiness to

demonstrate that they are pleased with the result. Another example is how much grief people should show at a funeral. The amount of grief expression should be relative to the relationship closeness to the person who passed away. Generally, the rule is that the closer you are with the deceased person, the more grief you would show. Similar accounts of display rule were also tested empirically for various occupations. A tax collector might be required to show a negative emotion, such as anger, to collect outstanding debts from people (Sutton, 1991), and a cashier might smile less in a busy supermarket (Rafaeli, 1989). Nurses are not supposed to show any emotion in the operation, but express kindness when communicating with patients and their families (Denison & Sutton, 1990).

It is noteworthy to mention that the display rule differs from another closely related concept, feeling rule, in the sense that the former concerns what emotion people should *express* to others; the latter deals with what emotion people ought to *feel* for the given social situations. Dictated by social norms, *feeling rule* informs us "*what to feel, when to feel, where to feel, how long to feel, and how strong our emotions can be*" (Hochschild, 2011, p. 3). To illustrate her idea, Hochschild (1979), who coined the term "feeling rules", used the example of a graduating senior who experiences mixed feelings of sadness and anxiety on her graduation day. However, because her parents will be attending her ceremony, she feels that she is indebted to them in the context of what emotion she *should* feel and show to others and, therefore, would have to try to feel and show happiness to her parents during the ceremony.

Expanding upon Hochschild's concept on how society and organizations commoditize people's emotion experience, she defines *emotion work* as the "*act of evoking or shaping, as well as suppressing feeling in oneself*," (Hochschild, 1979, p. 561) bound by feeling rules. Hochschild further explained emotion work as the work of how one manages emotion as one such act in the presentation of the self under the framework of impression management. She distinguished between two forms of emotion work, namely, surface acting and deep acting.

Surface acting refers to how one manages their emotion display to the outside world, but does not involve manipulation on how they feel internally. Hochschild compared surface acting to Goffman's (1959) dramaturgical perspective on acting, arguing that the actor would merely alter outer emotion(s), as in how they dress, talk, and act, without changing the inner feelings. *Deep acting*, on the other hand, involves inducing modification of one's inner feelings in aims to create an authentic emotion response. One way to do so, for instance, is by changing how one *thinks*

about the situation. Using the analogy of method acting, Hochschild emphasized how deep acting involves the person becoming the character they portray. Thus, it no longer requires fake acting on the surface and, instead, presents a real character that indeed feels and expresses appropriate emotions required by the situational context. In Hochschild's argument, the deep acting strategy was preferred compared to surface acting strategy, as deep acting demonstrates the moral of authenticity to others, as well as triggers less suffering in terms of the cost or effort, when appropriate feelings are demanded to be displayed in the social scene.

In her book, *The Managed Heart*, Hochschild provided examples of emotion work, such as flight attendants being reminded by their company to always bear a smile in front of passengers, despite the fact that they might indeed be feeling exhausted at the end of the day. These smiles could be considered as forms of emotion work that come into part of their job duties and are compensated by their wages. Another classic example of emotion work is how Disneyland workers are trained to universally smile at all times (VanMaanen & Kunda, 1989). This imposed requirement to manage emotion in the workplace is sometimes referred as emotion labor, where Morris and Feldman (1996, p. 987; cf. Grandey, 2000) defined it as "*the effort, planning, and control needed to express organizationally desired emotion during interpersonal transactions*."

I have now covered both the concept of emotion regulation and emotion work (emotion labor). Although previous research tends to study them separately in their own subdomain, more and more researchers have pointed out that more integration between the streams of study is warranted (Mikolajczak, Tran, Brotheridge, & Gross, 2009; von Scheve, 2012). As illustrated in figure 3 below from Gross and Barrett (2011), by and large, when integrating the process of emotion regulation with the concept of emotion work, *deep acting* constitutes the attention deployment and cognitive change component of Gross's ER process model, which is responsible for modifying one's underlying emotion experience. *Surface acting,* on the other hand, constitutes the response modulation component of Gross's ER process model, which is responsible for modifying one's emotion expression. This state is also referred to as *emotional dissonance*, when one's inner emotional feeling does not comply with the outer emotion expression shown to others.

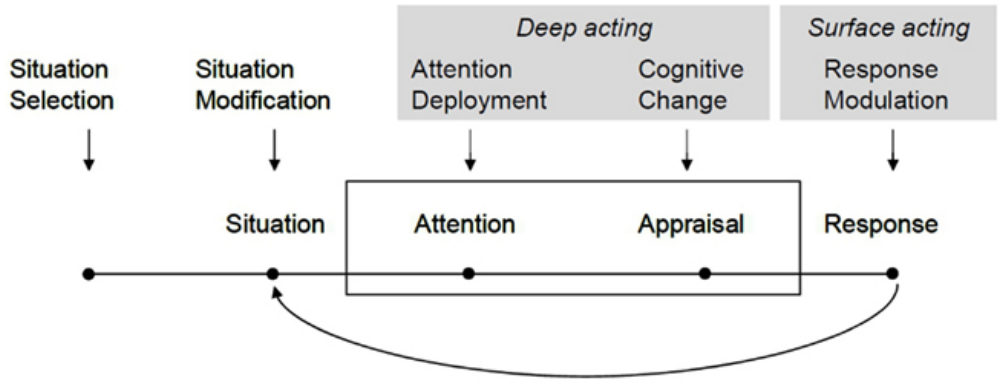

Figure 3. Deep Acting and Surface Acting in Gross' process model of emotion regulation (Gross & Barrett, 2011; von Scheve, 2012).

1.5.2.2. Social Function of Emotion and Reaching Goals[7].

> *"This social function (of emotion) is inferred from the fact that the expression of emotions has consequences for how others respond to us, and for how we relate to others."*
> (Fischer, Manstead, & Zaalberg, 2003, p. 172)

What does emotion expression serve in social settings? Social functionalist, Van Kleef (2010), argues that if emotion is expressed on your face, it must serve an evolutionary purpose. Proposed by emotion functionalists, such as Frijda (1986) and Thompson (1994), this approach emphasizes how social functions of emotion are helpful and adaptive for people to deal with others in their everyday lives. As one of the main themes of the thesis, the functional account provides some compelling reasons on how adaptive functions of emotion expression might help people to strategically reach their goals in social interactions. The functional approach of emotion regulation complements the core features of emotions. The generation of emotion and the process of emotion regulation are regarded as reactions in relevance to one's goals, while the action tendencies and the control precedence properties of emotion are functional and adaptive. These features of emotion and emotion regulation could provide an important signal for us, and influence how we think, act and behave accordingly to facilitate individuals to reach their goals. The social functional approach

[7] In the last section, I outlined some reasons people might need to regulate their emotion to fulfill social and organizational demand. This current section is a crucial part of my thesis where I discuss the social functionalist approach of emotion. I aim to provide arguments and supporting evidence to illustrate how this approach could explain why emotion expression could help people to reach their own goals in social interactions.

adds an additional perspective that explains how emotion and the regulation of emotion could help individuals to function in social setting(s).

A core feature of the social functional approach of emotion is that emotion expression could influence or transform the outcome of an interaction exchange, as it helps us coordinate social interactions and resolve problems (Keltner & Haidt, 1999). According to Darwin (1872), human emotion expression is both "*informative*" and "*evocative*" in nature (Keltner & Kring, 1998; Shiota, Campos, Keltner, & Hertenstein, 2004). In social encounters, a person's expression functions to inform others. It provides "*rich and important sources of information*" (e.g. Cote, 2005, p. 514; Ekman, 2003; Frijda & Mesquita, 1994; Hareli & Rafaeli, 2008; Izard, 1977; Keltner & Haidt, 1999; Van Kleef, 2010) to the interaction partner(s) in relevance to the "*inner states, goals, motives and intentions*" of that person (e.g. Van Kleef, 2010, p. 16). Social functional perspective posits that because of this informative nature of emotion, emotion expression yields interpersonal consequences (Cote, 2005; Keltner & Haidt, 1999). Emotion expression is thus, in essence, a form of social influence (Barsade, 2002; Kopelman, 2007; Parkinson & Simons, 2009). This social influence creates an impact on other(s) and shapes quality and outcomes of the social interaction. In particular, a person's emotion expression could "*evoke*" responses in the interaction partner(s), as it attempts to elicit a desired response concerning their attitude, emotion and behavior (Cote & Hideg, 2011).

One of the motives of regulating emotion display lies in one's intent to reach specific goals (e.g. Glaso, Ekerholt, Barman, & Einarsen, 2006; Niven, Totterdell, Stride, & Holman, 2011), and the social functional approach in emotion helps explain how individuals could use emotion expression to help reach their goals in interactions. Nevertheless, even given the prominence and attention directed to goal(s), in the studies of emotion, very few research studies directly address how expression and its regulation helps individuals attain their goals and objectives interpersonally. Previous research mostly focused on examining how people regulate emotion due to the social demands (i.e. emotion work perspective) and how regulation of emotion experienced, facilitates individuals to achieve their goals intrapersonally (Tamir, 2009c). Given our interest on studying the regulation of emotion expression and its influence, one of the primary aims of this thesis is to explore the functionality of emotion expression and its effect on goal attainment in their social lives[8].

[8] More details concerning the lack of ER research in goal attainment will be discussed in greater detail in Chapter 3.

Chapter 2

Conceptual Framework of the Dissertation

This chapter presents conceptual framework pertaining to the main subject of the thesis. There exists a common thread that connects the three studies. I will explain the rationale of these empirical studies and, hence, demonstrate how these three individual studies tie together as a theme. We have chosen to work on these particular subjects, as we think that these studies, individually and as a whole, would add some rather original insights and contribution to the current literature.

2.1 A New Analysis in Examining Traditional Views of Emotion Regulation

STUDY 1

Although emotion regulation plays such a crucial role in our lives, the traditional perspective on emotion regulation (mostly on surface acting) stresses how regulation of emotion expression could be detrimental and effortful. The logic of the argument proposed that, because the process of ER requires regulatory effort, resources would be depleted; therefore, triggering undesirable psychological and physiological effects on individuals. Empirical evidence supports this perspective as well; for instance, suppression of emotion expression has been demonstrated to be associated with negative consequences, such as increased physiological responses (e.g. Gross & Levenson, 1997), decreases in cognitive function (Muraven, Tice, & Baumeister, 1998; Richards & Gross, 1999), as well as less social support and satisfaction in interpersonal contexts. (For further explanation and research evidence, please refer to Study 1).

Even with mounting evidence that clearly demonstrates the effortful aspect of ER (surface acting: regulation of emotion display) in social situations, it is not really clear to us *which* ER mechanism(s) might contribute to higher regulatory effort in social settings. Parrot (1993) states that ER is a process to increase or decrease positive or negative emotion. This implies that there are at least four mechanisms in regulating emotion expression: to exaggerate positive emotion, to suppress positive emotion, to exaggerate negative emotion and to suppress negative emotion. Furthermore, there are two additional ER mechanisms when considering the congruence (authenticity) of positive and negative emotion felt and shown (Glomb & Tews, 2004). Pertaining to the literature review of regulating emotion in social contexts, a vast majority of research has heavily emphasized examining only one mechanism of ER, in particular, the suppression of negative emotion. In the last decade, more studies have looked beyond the commonly researched strategy of suppression of negative emotion, such as the suppression of positive emotion (Snyder, Heller, Lumian, & McRae, 2013) or the exaggeration of positive and negative emotion expression (Demaree, Schmeichel, Robinson, & Everhart, 2004; Schmeichel, Demaree, Robinson, & Pu, 2006). However, as the field has spotlighted suppression of negative emotion, to date, research on other ER mechanisms beyond that are still relatively limited. Quite often, evidence in regard to the consequences of ER is contradictory and not always clear (refer to Chapter 4- Study 1 for more details).

The current state of research is perhaps driven by some acknowledgement, which recognizes suppression of negative emotion as the most used ER mechanism in our daily lives[9], even though it was proposed that there is not just one approach in regulating emotion (Parrott, 1993), and different ER mechanisms do work differently and could yield differential outcomes. To our best knowledge, very few have studied all the ER display mechanisms (suppress negative, suppress positive, exaggerate negative, exaggerate positive, congruent negative and congruent positive) simultaneously in a real-life setting, perhaps due to how it might be challenging to conduct methodologically, or due to how ER has been measured previously[10].

Because of the lack of systemic studies that examined all the emotion regulation mechanisms, we feel there is an intense need to investigate and report precisely which ER mechanism(s) were performed when studying how they, as a whole, relate to other variables. Thus, as the objective of the first study, we examined positive and negative emotion felt and shown, measured in conjunction, and then when compared to each other, to identify which ER mechanisms might be associated with higher reported regulatory effort- a key factor that could lead to worsened psychological consequences (Gross, 2001).

We conducted the study by measuring both emotion felt and emotion shown of participants in social encounters, using two identical sets of Geneva Emotion Wheels (GEW: Scherer, 2005; Scherer, Shuman, Fontaine, & Soriano, in press)[11]. In this way, we retained all crucial information of the ER mechanism(s) performed and of felt and shown emotion that could also influence individuals' effort in regulation. Since quite a number of previous studies only measured ER mechanisms without recording the emotion felt and emotion shown, we thought it was rather neccessary to do so. In employing polynomial regression analysis, we not only resolved the limitation of the difference score method; we also contributed in terms of how the two distinct yet related dimensions of emotion felt and emotion shown could be studied simultaneously, while examining emotion regulation mechanisms derived from them. (For further discussion on why polynomial regression could potentially resolve some methodological issues, please refer to the rationale section of Study 1).

In this exploratory study, we posited that downregulation of negative emotion expression and upregulation of positive emotion expression during social interactions would be predictive of

[9] Note that our research shows otherwise: see the result section frequency table of Study 1.
[10] For more explanation, please refer to the rationale section of Study 1.
[11] For a graphical presentation of the Geneva Emotion Wheel, see Figure 5.

reported regulatory effort, largely as a result of the rather common need to strive for positive constructive interactions in everyday lives. Indeed, after controlling for personal level variables (gender, age, personality) and social interaction variables (private vs work context), we confirmed that the participants reported a higher regulatory effort during such encounters when they were suppressing negative emotion expression or when they were amplifying positive emotion expression. At the same time, the polynomial findings also illustrated that when emotion felt and emotion shown were aligned, meaning when congruent (authentic), emotion expression was being shown, instances of having low positive emotion (felt and shown) and/or high negative emotion (felt and shown) in social interactions associated positively with the intensity of regulatory effort. All these findings comply with the common notion that people strive for positive constructive social interactions; however, it might consume more regulatory effort to do so, as demonstrated in cases with its related regulation mechanisms of exaggerating positive and suppressing negative emotion (Study 1: Hypothesis 2 and 4). Moreover, according to this perspective, one would be inclined to show positive emotion and to hide negative ones. As the finding depicts (Study 1: Hypothesis 1 and 2), because low positive emotion and high negative emotion are working against the need for positive social interactions, one might experience a high regulatory effort required to fine tune these undesired emotions.

This study suffers from a limitation. Despite the quite apparent result from over 3000 social interactions, these findings should *not* be interpreted in a way that is universal across *all* social situations. Recent research (Van Kleef, 2014) and research on display rules (e.g. Sutton, 1991) have stressed how specific social context should be considered in regard to displaying the "right" emotion, as some particular social circumstances might reveal. Showing negative emotion and dampening positive emotion might be more suitable in certain contexts, such as for tax collectors and police (Rafaeli & Sutton, 1987). These deviations in the requirement of performing ER could be a basis for differentiation in terms of how they might influence regulatory effort and other outcomes differently. Therefore, I strongly suggest that situational context should be taken into consideration.

All in all, this study contributes to the traditional approach in emotion regulation by using a relatively novel choice of analyses to explore and examine how emotion felt and emotion shown, when studied together, would be associated with regulatory effort. In the next section, I

discuss how we move away from the traditional approach of ER and examine subsequent studies under the framework of the social functional approach of ER.

2.2 Reaching Goals in Social Interactions: Moving towards the Functional Perspective of Emotion Regulation

STUDY 2

"*Whether authentic or feigned, strategically displayed emotions can function as behavioral tactics that lead to desired outcomes*" (Potworowski & Kopelman, 2008, p. 339)

One major proposition concerning the underlying motivation of ER is how it might help individuals to fulfill goals in an interpersonal world (e.g. Campos et al., 2004). However, this fundamental assumption has long been overlooked and has rarely been investigated. To empirically investigate whether ER could fulfill goal(s) in social situations, we investigated which ER strategy would be effective for reaching goals in an interpersonal context. During the investigation (Study 2), we tested whether the strategy of expressing and amplifying positive emotion expression-something that has been largely ignored in emotion work literature, could help individuals reach goals in social interactions at the workplace. As predicted in the hypotheses, we found that expressing positive emotion would be beneficial for goal attainment during social interactions with both superiors and colleagues, while the regulation strategy of amplifying positive emotion expression (when the underlying positive emotion felt is not particularly strong) would *only* be beneficial for goal attainment when interacting with superiors.

Although empirical findings in the second study, which indicated that positive expression could lead to goal attainment in social interactions, are rather new; three important perspectives inspired this research query. First, the functional perspective of ER informed how emotion expression could serve as a form of social influence that help people to strategically reach their goals during social interactions (e.g. Côté & Hideg, 2011). Second, research has pointed out that positive expressions are related to favorable interpersonal outcomes. Third, theories on impression management suggested that emotion expression (surface acting) could be a part of the

representation of self in daily life, and this self-representation could help people to achieve what they want interpersonally (e.g. Wayne & Liden, 1995).

To give you more reason why we postulated that positive expression and its amplification could potentially help people to achieve goals at work; allow me to elaborate on the three above-mentioned perspectives. As discussed in Chapter 1, the functional approach in emotion states that emotion expression could influence or transform the outcome of an exchange. The informative nature of emotion provides important information about the "*inner states, goals, motives and intentions*" of the person who displayed it (Van Kleef, 2010, p. 16). It is thus quite plausible that information provided along with the expression would, to some extent, evoke a desirable response in others (Niven et al., 2011). Based on this rationale, emotion expression could potentially be used as a form of social influence to attain goals (Barsade, 2002; Côté & Hideg, 2011; Hareli & Rafaeli, 2008; Kopelman, Rosette, & Thompson, 2006). From another perspective using positive psychology, quite a few studies have found relevant evidence supporting how positive emotion expression leads to better outcomes, such as higher customer satisfaction, higher rating of service quality (Barger & Grandey, 2006; Tsai, 2001), higher personal accomplishment (Brotheridge & Grandey, 2002), more prosocial behavior at work (George & Bettenhausen, 1990), better group coordination (Sy, Côté, & Saavedra, 2005), higher rating in leadership effectiveness (Bono & Ilies, 2006), better negotiation outcomes (Kopelman et al., 2006), flourishing outcome in groups (Losada, 1999), higher supervisor rating, and better social support at work (Staw, Sutton, & Pelled, 1994). (For more details, please refer to the table on the next page).

The trend is quite clear. Positive expression leads to better interpersonal outcomes; however, before our investigation, whether positive emotion could help people to reach goals during social interactions, was not known, due to the lack of direct empirical research. This research direction was inspired by the integration of the functional perspective of emotion expression with the mounting evidence that demonstrates desired outcome of positive expression.

Table 1. Empirical Evidence Chart: Positive Expression and Favorable Outcomes at Work[12]

Author, Year	**Setting**	**Evidence pertaining to Interaction Setting**
(Barger & Grandey, 2006; Pugh, 2001; Tsai, 2001, pp. as cited in Hideg & Cote, 2011)	Emotion Work	Positive display by service provider predicts better customer satisfaction and higher rating of service quality from customers.
(Brotheridge & Grandey, 2002)	Emotion Work	Positive display (surface acting) by service provider predicts higher personal accomplishment on the job.
(Trougakos, Jackson, & Beal, 2011)	Emotion Work	Positive display (display rule) by poll workers predicts favorable attitudes and emotion in respondents.
(George & Bettenhausen, 1990)	Leadership	Positive display by leaders predicts more prosocial behavior at work group, hence, improving customer service and sale performance.
(Sy et al., 2005)	Leadership	Positive display by leaders predicts positive mood of individual group member and positive affective tone in the group. It also predicts outcome in group processes: group exerts less effort and is better coordinated.
(Bono & Ilies, 2006)	Leadership	Positive display of a leader predicts positive influence on follower's mood, follower's attraction to leader and higher rating of leadership effectiveness, hence, further promotes beneficial employee and organizational outcomes such as on performance gain.
(Kopelman et al., 2006)	Negotiation	Positive display of a negotiator predicts higher likelihood to incorporate a mutual future business relationship, to close a deal, and to gain concessions from the other party in varieties of negotiation settings.

[12] Literature review reveals how expression of a positive display quite clearly elicits favourable work-related or personal-related outcomes. These empirical evidences are integrated from research on workplace-related domains, such as negotiation, leadership, group processes, and emotion work. I summarized the findings in an illustrative table adopted from Cote and Hideg (2011).

(Barsade, 2002)	Group	Positive display of a confederate in the group predicts improved cooperation, decreased conflict and increased perceived task performance in a group setting.
(Fredrickson, 2004; Losada, 1999).	Group	Observable positivity in management teams predicted "flourishing" outcome in groups. "Flourishing" is defined as showing high performance across profitability, customer satisfaction and evaluations by superiors, peers and subordinates.
(Staw et al., 1994)	General Work Setting	Positive emotion and positive display of employees predicts higher work achievement (from supervisor ratings), higher social support from both supervisors and coworkers, and higher wage.
(Cote & Morgan, 2002)	General Work Setting	Amplification of positive display of worker predicts higher job satisfaction in the long-term.

As expected, these findings also comply with impression management literature in which positive emotion expression could be taken into account as a form of strategic influence in the workplace. For instance, ingratiation and flattery are some of the most commonly used strategies associated with positive emotion to influence others to accomplish objective(s) in an interpersonal context (e.g. Kipnis & Schmidt, 1988). This effect might be more apparent for interactions with superiors (as compared to colleagues), possibly as a result of their power distance, position and responsibility. Furthermore, superiors might be more receptive to subordinates' expression (Mast & Darioly, 2014) as a form of communication, as they, when influenced, could have a rather strong influence over the interactional outcome. In summary, the findings in Study 2 conformed and complemented these above perspectives in which positive emotion expression and its amplification could be used as a strategy at work to enhance goal attainment, especially for interactions with superiors.

2.3 A New Perspective: The Role of Goal attainment in Emotion Regulation and Well-Being

STUDY 3

We have demonstrated that regulating emotion expression could be in the service of reaching goals during social interactions (Study 2). At the same time, while following the traditional perspectives on emotion regulation, we have demonstrated that ER is indeed effortful, especially in certain cases of surface acting (Study 1). Empirical studies have shown that the management of emotion expression would impede well-being or other psychological outcomes. Confronted with the conflicting point of views from the two studies presented, another intriguing query arises. On one hand, it is quite clear that regulatory effort in emotion regulation is straining and would impair well-being, as research demonstrated (Zapf, 2002). On the other hand, due to how expression of emotion could coordinate social interactions and solve interpersonal problems (Keltner & Haidt, 1999), ER could, in a different perspective, be considered as an effective strategic means to actually help people to reach their goals. These conflicting perspectives triggered our interest to examine the cost and benefits of emotion work under circumstances where goal(s) is present in the social interaction. We thus conceived Study 3 as an extension of Studies 1 and 2, in which we investigated whether goal attainment could alter consequence of emotion regulation, in particular, whether success in achieving goal(s) could moderate and buffer the negative impact on well-being caused by effort spent on regulating emotion.

The ultimate purpose of emotion regulation is to reach a goal. In this perspective, emotion regulation does serve an important purpose. We reason that the pursuit of goals could motivate individuals to engage in emotion regulatory behavior; consequently, success in attaining goal(s) might, at least partially, pay the toll of regulatory effort socially demanded (Thompson, 1994). Furthermore, given the benefits goal attainment might bring, well-being outcome could very likely to be enhanced, as demonstrated by previous research (Argyle, 1987; Diener, 1984; Emmons, 1986; Nix, Ryan, Manly, & Deci, 1999). For these reasons, we posit that negative effects of regulatory effort on well-being could be potentially offset by the positive effect of goal achievement. For a graphical representation of the moderation and the study variables, please refer to Figure 4 below.

So far, it is very well studied and well-known that effort from emotion work would lower well-being (Study 3: Hypothesis 1). However, to our knowledge, no study has empirically measured the relationship between goal attainment and well-being in social interactions. This study, therefore, could be considered among the first to seek such relationship (Study 3: Hypothesis 2). After such phenomena were established in the study (Hypothesis 1 and 2), we proceeded to investigate the main research question- whether regulatory effort from performing emotion regulation to achieve goals could be remunerated and justified by such rewards brought forth by succeeding in an individual's goal achievement as argued above (Study 3: Hypothesis 3). All of the hypotheses were confirmed. First, regulatory effort predicted lower well-being as predicted and supported by earlier studies. Second, the level of goal attainment predicted higher well-being after social interaction. Last and most importantly, goal attainment moderated and diminished the negative effect of regulatory effort on well-being.

This moderating role of goal attainment aligns with early theories in the functionalist approach of emotion, where it conceptualizes emotion as "*flexible, contextually bound, and goal directed*" (Campos, Mumme, Kermoian, & Campos, 1994, p. 284). Goal attainment is a central feature that explains emotion regulation behaviors and its regulatory effort. This research contributes to the emotion literature as it could help answer, at least partially, the long posed queries of whether emotion regulation (in this case, response focused regulation, or surface acting) might be costly or beneficial under different circumstances, and in this case, ER is less detrimental when the goal(s) is successfully achieved.

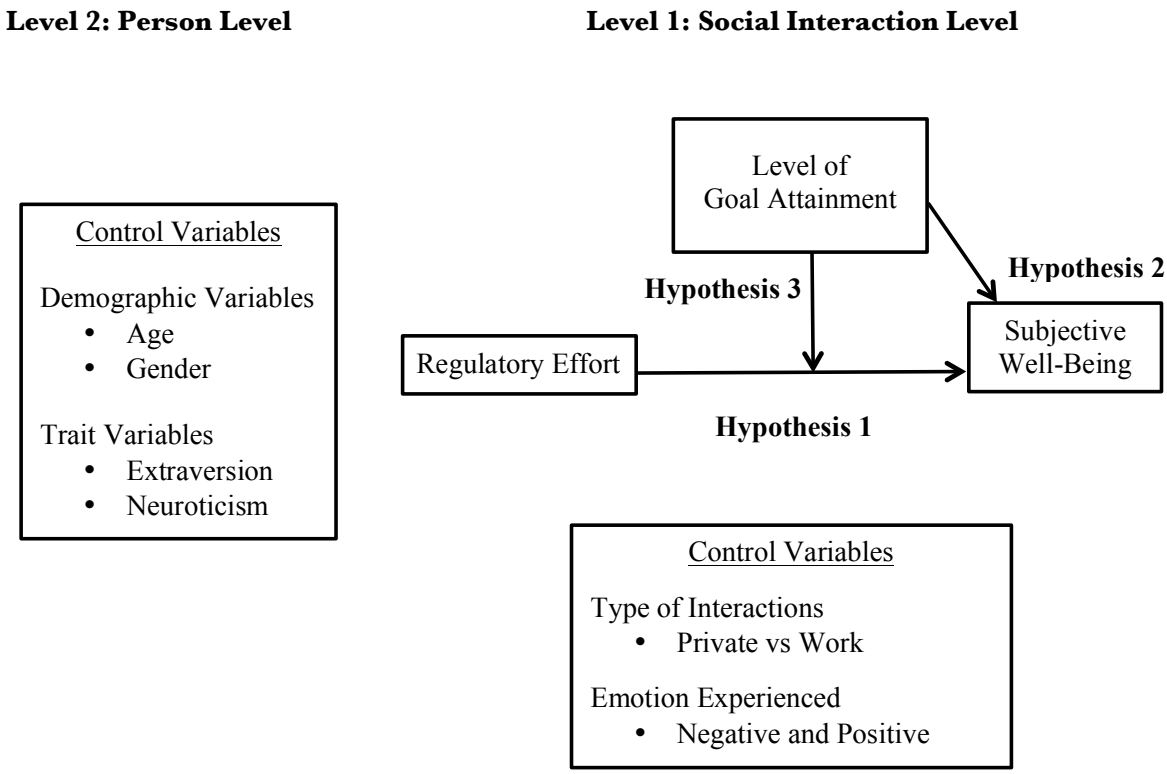

Figure 4. Model of Study Variables in Study 3.

Chapter 3

Justification of Research[13]

This chapter devotes to explain why this research is necessary and why it might be quite important to serve as a potential contribution in emotion regulation research. Although the study of emotion and emotion regulation has expanded at an incredible rate, there exists several areas of limitations we would like to pinpoint in the current state of research. In this chapter, I will first introduce and review issues and possible weaknesses pertaining to current research on regulation of emotion expression. Then, I will present the significances of how our research could address, answer and refine these particular issues.

The issues we identified through literature review are:

1. The need to distinguish emotion felt and emotion shown when studying for emotion regulation
2. The mixed findings on the consequences of emotion work/labor
3. The lack of focus on goal attainment, an important variable in the study of ER
4. The negligence on the role of positive emotion display on social interaction outcomes
5. The lack of empirical research that considers the types of interaction partners

[13] Kindly note that this chapter overlaps substantially with the contents of the three articles. For the purpose of centralizing and structuring arguments in the umbrella, I have delineated these issues as a standalone chapter.

3.1 Issue 1. The Need to Distinguish Emotion Felt and Emotion Shown When Studying for Emotion Regulation

The process model of emotion regulation clearly delineates the process of regulating emotion experiences and regulating emotion display. Similarly, pertinent in the context of emotion work (Hochschild, 1979), researchers acknowledge the distinct nature of experienced (felt) and displayed (shown) dimensions of emotion. However, some research failed to distinguish internal emotion felt and external emotion expression in separate dimensions (Tschan & Messerli, 2005) and considered these two variables to be the same. Generally speaking, some research implicitly referred to inner emotion experience and outer emotion expression interchangeably by using the generic term "emotion", without further clarification of which specific dimension of emotion they were addressing. Other research argued that it might be less integrative to measure emotion felt and emotion displayed distinctly, as there is an intertwining nature between emotion feeling and emotion expression (Staw et al., 1994). The argument that emotion expression is predominately a reflection of internal states of emotional feeling might hold true in some sense (Ekman, 1972; Elfenbein, 2007). Recent research, nevertheless, has demonstrated more subtle differences. Emotion experienced (felt) and emotion expression (display) could differ due to at least two main reasons. First, it has been confirmed that individuals differ in terms of their emotion expressivity (Gross & John, 2003). Second, personal or social motives in facing reality of the social world could prompt individuals to regulate their emotion to control what they would want to display to audiences externally (Fischer & Manstead, 2008). Besides, researchers sometimes only measured the regulation process (e.g. by asking whether they hide their emotion) and neglected to measure the crucial emotion components of emotion experienced and shown. This practice could have led to loss of critical information. Researchers have explained how ER processes and consequences could vary depending on the emotion experienced (Nezlek & Kuppens, 2008) and the emotion they would like to show (Brotheridge, 2002). For instance, the process of hiding happiness experienced could work vastly different from hiding sadness. Thus, to better the understanding of how ER affects interpersonal outcomes, both felt and displayed emotion should be examined at the same instance, yet as distinct dimensions.

3.2 Issue 2. Mixed Findings on the Consequences of Emotion Work

A vast majority of emotion regulation and emotion work literature claimed that regulation of emotion expression (SA: Hochschild, 1979), as opposed to regulation of the internal feeling (DA), is a source of strain. Surface acting could cause negative psychological consequences such as burnout, strain and lowered well-being, as explained by its dissonance nature (e.g. Grandey, 2000), and emotion work has essentially been depicted as a work requirement imposed by society and organizations. Counter-arguments have been issued. These findings demonstrated that emotion work does not always necessarily yield negative consequences. Given the need to consider the rich interpersonal contexts in which individuals are situated, the use of emotion work as a form of emotion regulation could be regarded as functional for individuals, such as for the purpose of personal gains (instrumental approach) or for fulfilling situational appropriateness (feeling rules, display rules). Ashforth and Humphrey (1993) stated, "*Surface Acting and Deep Acting may become routine and effortless for the employee, rather than sources of stress*" (Grandey, 2000, p. 96). Additionally, Cote and Morgan (2002) found that amplification of positive emotion (as a form of surface acting) could lead to job satisfaction. Yet, implications from similar lines of evidence have often been largely ignored. In a conference paper, "*Burnout versus Making a Difference: The Hidden Costs and Benefits of Emotion Work*", Newman, Mastracci, and Guy (2005) summarized favorable claims from emotion work research.

> *"…Emotional labor can also produce favorable results, including increased job satisfaction, security, self-esteem and empowerment (Strickland 1992; Tolich 1993; Leidner 1993; Wharton 1993, 1996; Adelman 1995); increased psychological well-being (Ashforth & Humphrey 1993; Conrad & Witte 1994); decreased stress (Conrad & Witte 1994); increased task effectiveness (Ashforth & Humphrey 1993; Connellan & Zemke 1993); and an increased sense of community (Shuler & Sypher 2000)."*

Given the strong argument drawn from the opposing perspectives that underlie the pros and cons of surface acting, the heated debate remains controversial. Gross (1998) and Mikolajczak et al. (2009) raised the same concern in their discussion, that this line of research should look more into the cost and benefits of emotion regulation, perhaps by identifying some key elements that would unravel the relationship between ER and the psychological consequences. More research on this topic is needed to explain such mixed outcomes concerning regulation of emotion expression and its consequential outcomes.

3.3 Issue 3. Lack of Focus on "Goal Attainment"- An Important Variable in the Study of ER

Emotions and the regulation of emotion are one of the strategies individuals use to acquire their goals in interpersonal encounters. Previous research has confirmed how regulation of internal emotion experienced facilitates individuals to achieve their goals intrapersonally (e.g. Tamir, 2009a). Yet, in contrast, less research focused on how emotion display and the regulation of emotion display could help individuals to attain their goals in a dynamic interpersonal world. One main reason could be, that traditionally, emotion regulation of expression is studied under the realm of emotion work instead of the social function of emotion, which explains a healthy, productive way of using emotion to help individuals shape interactional outcomes.

Current research on emotion labor and emotion work tend to draw on an assumption that emotion expression is part of the society's commoditized property, assets of an organization and a job requirement in exchange for wage (Grandey, 2000). Additionally, this part of the literature emphasized how employees should display an emotion that "fits" or "matches" the display rule to fulfill organizational goals and specific occupational roles (Rafaeli & Sutton, 1987). This emotion work perspective generally takes *less* into account of how the management of emotion display could be functional for individuals. Nevertheless, employees could indeed, proactively use their expression for their personal advantage, as one could tactically adopt an emotion display as a tool for fulfilling their own personal need or for acquiring instrumental gain. Individuals could be driven by different personal motives, such as interpersonal relationship management, impression management and self-preservation purposes (Manstead & Fischer, 2000), to display emotion differently than what they felt (surface acting) in a social settings. Integrating the dramaturgical perspectives of impression management, individuals could be driven by personal and social motives to sculpt emotion display, such as happiness, to the external audience in cases when they do not genuinely feel that particular emotion. They might proactively do so to satisfy various personal goals or objectives, with aims of achieving certain accomplishments to get what they want (Frijda & Mesquita, 1994), or to be socially desirable in the work environment. Here's the main issue we hope to address though. Even though researchers have *suggested* how emotion display is linked to one's desirable goal outcomes, few empirically studied or tested these assumptions (Tran, 1998), despite such a calling (Gross, 1998).

3.4 Issue 4. Negligence on the Role of Positive Emotion Display on Social Interaction Outcomes

Most research on emotion regulation of expression has focused on suppressing negative emotion. The definition of response focused emotion regulation encompasses more. While suppressing negative emotion could be a major mechanism of emotion regulation (Butler et al., 2003), it might not account for all types of display regulation. Display rule informs us that there are more kinds of strategies, such as intensification of expression. In the study of ER and emotion work, expression and amplification of positive emotion has often been neglected (Staw et al., 1994).

Considering that positive psychology has soared and flourished over the last decade, these findings give birth to a popular new theme of how an individual's happiness (i.e. positive emotion) cultivates and precedes success. Lyubomirsky, King, and Diener (2005) published a meta-analysis that consolidated findings and evidence from 225 papers (comprised over 275,000 participants) to elucidate how happiness could be the precursor for success in life. Pertaining to the organizational domain, happiness could lead to higher job performance, higher sales volume, more income, higher performance ratings from supervisors, more social support from colleagues and supervisors, and high favorability ratings (for a review: see Boehm & Lyubomirsky, 2008; Lyubomirsky et al., 2005). A wealth of evidence has been garnered illustrating how positive emotion drives success-related outcomes. As the field matures, one might ask, what else is intriguing to study?

One main concern is the lack of empirical research or emphasis on *expressing and amplifying positive* emotion expression. This issue is even more prominent in the work and organization domain. The majority of positive psychology research investigating emotion and its associated outcomes has solely focused on studying individuals' emotion experienced or similar constructs, related to the internal emotional state (positive affectivity, well-being, etc.). Even when some of the research primarily concerned how emotion influences social consequences (Staw et al., 1994), the investigation on positive emotion expression or display, another salient dimension of emotion pertaining to how emotion manifests itself in interpersonal sphere, has been largely ignored (Papa & Bonanno, 2008). The direct link between positive display and successful outcomes has only been studied sparingly (Harker & Keltner, 2001).

3.5 Issue 5. Little Empirical Research that Considers the Types of Interaction Partners

In studying how ER would influence interpersonal outcomes, one has to account for the role of the interaction partner. It is, essentially, the other people that we would like to communicate with and cast influence on. People might regulate their emotion quite differently in private and at work. It is important to account for the situational context (von Scheve, 2012), such as whether the relationship is communal or exchange in basis (Clark & Finkel, 2005). Moreover, there seems to be a missing area of research to account for the types of interaction partners in social interactions.

Past experimental research has discovered how positive expression enhances work outcomes in relation to leadership and sales or service industry settings. Few research studies exist that investigate how employee expressions are actually played out in real-life social interaction settings at work when involving different categories of real life work partners. It has been argued that emotion work happens "*both at and away from the frontline*" (Glaso & Einarsen, 2008, p. 493). It is not only limited to interactions with clients or bosses (Glaso et al., 2006; Tschan, Rochat, & Zapf, 2005). Yet, little research has examined and compared the differences of how emotion expressions affect outcomes during interactions with "in-house" work partners, such as with supervisors and colleagues. Researchers urged that emotion expression and emotion work with colleagues should be studied more (Mann, 1999). Thus, the last issue we would like to address is the need to examine how employees' positive expression influences outcomes during real-life workplace interactions with different work partners, like supervisors or coworkers, to whom employees might share a different nature of relationship with (Clark, 1993).

3.6 Significance of Research

In the above section, we have reviewed some major issues that pertain to the current research of emotion regulation in interpersonal settings. Our research contributes by offering corresponding solutions to each of these specific issues. By designing and implementing research to directly address these problems, we filled the knowledge gap for the subject concerned.

First, to clearly identify emotion felt and emotion shown as separate constructs when studying them, we distinctly measured emotion display and emotion felt to study the two dimensions of emotions simultaneously. Specific to resolving these issues, we utilized two sets of

Geneva Emotion Wheel (Scherer, 2005) in the research, each of which measures and records one dimension of emotion (i.e. emotion felt and emotion displayed respectively). See Figure 5 for a sample of GEW[14] we used in the studies.

Second, given the mixed findings on the consequences of surface acting, we would like to expand the understanding on whether surface acting is related to beneficial or detrimental personal well-being. When we consider the social functional approach of emotion, which offers the other side of the argument wherein emotion regulation could be seen as influential for shaping interpersonal outcome, the downside of surface acting should be re-evaluated. In Study 3, when taking successful goal attainment in workplace interaction as a moderator into account, we tested whether negative consequences of emotion work on well-being could be rendered.

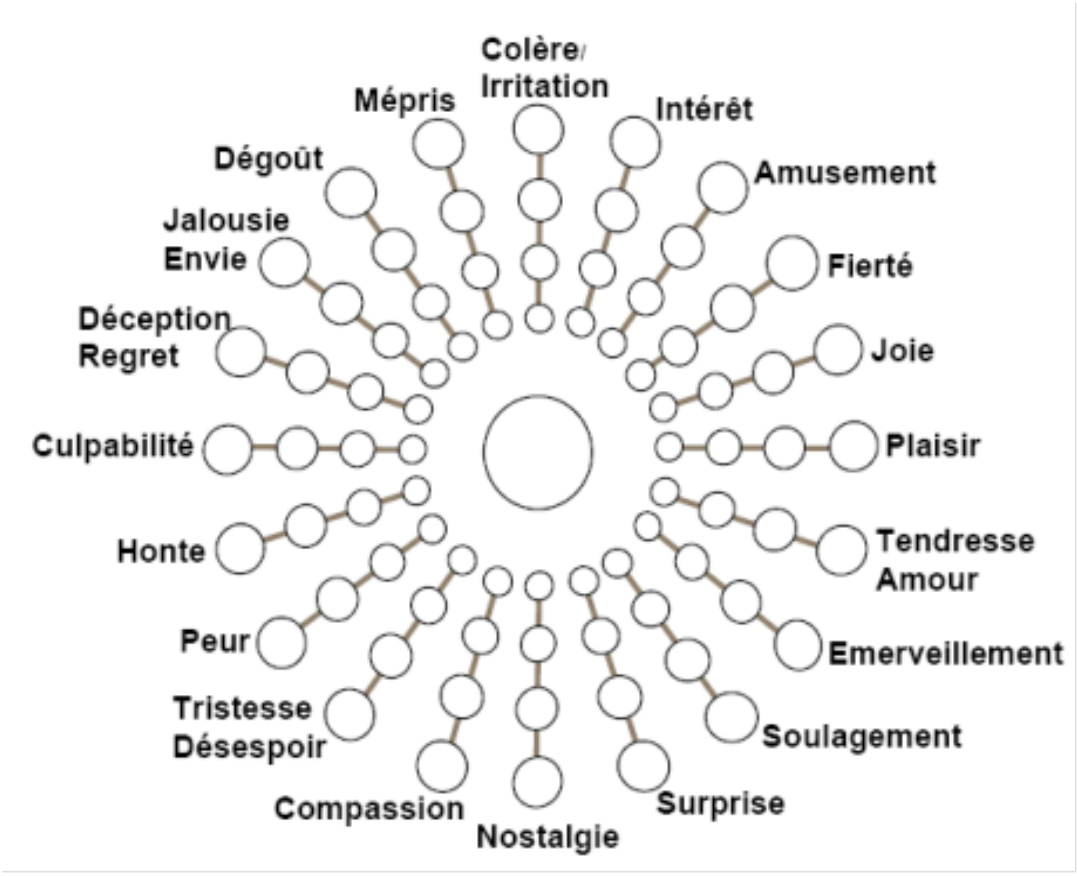

Figure 5. Variant of the Geneva Emotion Wheel (Scherer, 2005) used in our studies to measure Emotion Felt and Emotion Shown.

[14] Our studies were conducted in French.

Third, we examined if surface acting regulation could really function to serve individuals' goals at work. To establish this investigation, the research design in Study 2 incorporated the construct "objectives attained" to measure whether individuals fulfill their individual goals or objectives in each interaction at work. Furthermore, we tested whether goal attainment could result from certain display ER strategies.

Fourth, given the heavy focus on negative emotion suppression in the field, we hope to balance the field by investigating positive display and its impact related to reaching success-related outcomes in the workplace. This is targeted in Study 2, where the relationship between positive display and its amplification on goal attainment was examined. Prior to this study, these relationships had not been explicitly or empirically studied.

Fifth, to investigate how emotion display would play out when individuals interact with different kinds of interaction partners, we measured in which context (i.e. private vs work) and with whom (i.e. family, friends, supervisor, colleagues, etc.) the participants interacted. Furthermore, we also closely investigated each real-life social interaction using a variant of the Rochester Interaction Record (RIR). In Study 1 and 3, we introduced the setting (private vs work) as a variable to control for the situational context. In addition, in Study 2, we analyzed micro level interactions on positive expression and outcomes, which could provide further insight into how this phenomenon would differ when interacting with colleagues or with superiors.

These studies are important: each of the micro level social interactions in our lives "*when taken together, constitute human experiences*" (Kivisto & Pittman, 2004, p. 272). Implementing these above solutions by the research we conduct could potentially decipher several unresolved questions in the field. In the following chapters, we proceed to the individual studies.

Chapter 4

Study 1, Manuscript

Wong, E., Tschan, F., Stalder, B., & Semmer, N. K. (In Preparation). Examining the link between congruence and regulation of emotion expression to regulatory effort- a polynomial regression investigation.

Examining the Link between Congruence and Regulation of Emotion Expression to Regulatory Effort- a Polynomial Regression Investigation

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Abstract

This is an exploratory study that utilized multilevel polynomial regression analyses to examine how congruent (authentic) display of emotion expression and how various regulation mechanisms of emotion expression are associated with effort in everyday interpersonal encounter. For a seven-day self-observation period, 115 Swiss participants reported over three thousand social encounters, which took place in their actual private and work lives. Each social interaction was captured by a variant of Rochester Interaction Record (RIR), where the participants reported their emotion felt and emotion shown by using two sets of Geneva Emotion Wheel (GEW). Participants also reported their perceived level of effort in the social interaction. Analyses were conducted separately for positive and negative emotions. Results revealed that among *positive* emotion felt and shown, congruent (authentic) display of emotion shown was associated with low level of effort, whereas exaggeration of positive emotion was associated with high level of effort to a stronger degree than suppressing positive emotion. Among *negative* emotion felt and shown, congruent (authentic) display of negative emotion, known as venting, was associated with high level of effort, whereas suppression of negative emotion was associated with high level of effort to a stronger degree than exaggerating negative emotion. Implications for the importance in methodological and theoretical development are discussed.

Keywords: response-focused regulation, surface acting, emotional dissonance, emotion congruence, effort, polynomial regression

Introduction

Social convention dictates how we regulate emotion in everyday lives. To behave in accordance to social norms, it is a common requirement for us to modify our emotion expression when interacting with others. We show our happiness more than we actually feel for a gift we do not truly like (Hochschild, 1979, 1983), we suppress our anger in front of a powerful boss (Gross, 2009), and we hide our anxiety when we send our kids away for the first day of school (Gross, 2002). Regulation of emotion expression is crucial for adaptive functioning in everyday social contexts (John & Gross, 2004) and in workplace success (Barsade & Gibson, 2007). "*To get along with others, one must be able to regulate which emotions one has and how one experiences and expresses these emotions*" (Gross, Richards, & John, 2006, p. 13). However, managing emotion expression, known as response-focused regulation (or surface acting), is not without costs (Grandey, 2000). Emotion regulation requires constant effort from the actor, and empirical research has confirmed that regulation of expression could be "*costly*" for individuals, as it consumes cognitive resources and generates psychologically taxing consequences (Ashforth & Humphrey, 1993; Cote & Morgan, 2002). "*Emotional dissonance*", the phenomenon that describes the discrepancies in our underlying inner emotion felt and our outer public display of emotion (Grandey, 2003), is an uncomfortable, undesirable cognitive dissonance state with psychological tensions that require individuals' effort to reconcile such differences (Pugh, Groth, & Hennig-Thurau, 2011). Prolonged emotional dissonance could result in undesirable consequences, such as lower well-being, exhaustion, and burnout (Morris & Feldman, 1996; Pugh et al., 2011; Wharton, 1993).

People engage in various kinds of emotion regulation in their daily lives (Brans, Koval, Verduyn, Lim, & Kuppens, 2013; Gross, 2015). To regulate emotion expression by surface acting, one could employ different regulation mechanisms- they can exaggerate,

suppress, and display positive or negative emotion expressions (Glomb & Tews, 2004; Nezlek & Kuppens, 2008; Parrott, 1993). Emotion literature has considerably demonstrated that managing emotion expression is effortful (e.g. Gross & Thompson, 2007), which is also reflected in the measurement scales (Glomb & Tews, 2004). However, what remains not as clear, is (are) which response focused regulation mechanism(s) might be *particularly* effortful. To date, surface acting mostly concerns studies of suppression of negative emotion and its undesirable outcomes (Hülsheger & Schewe, 2011), while to a larger extent, neglected other regulation mechanisms. Although most findings illustrated surface acting and/or emotional dissonance lead to strain (e.g. Hülsheger & Schewe, 2011; Mesmer-Magnus, DeChurch, & Wax, 2012), some researchers pointed out that findings might not be always consistent, especially when examining regulation mechanisms other than the well-researched mechanism of suppression of negative emotion (Brotheridge, 2002; Cote, 2005). As each response focused regulation mechanism differs in their nature and execution, each regulation mechanism might influence effort quite differently (Nezlek & Kuppens, 2008). For instance, research has demonstrated that compared to suppressing positive emotion, which typically associates with diminished positive emotional experience, suppressing negative emotion does not reduce such underlying negative experience and could be more harmful psychologically (Butler et al., 2003; Goldin & Gross, 2010), as compared to other regulation mechanisms.

Currently, there is a lack of empirical evidence that systematically studies the way different mechanisms of response-focused regulation might relate to effort. The aim of this paper is to conduct a more comprehensive and informative exploratory analysis by taking into account both emotion experience and emotion shown, simultaneously, as well as considering both positive and negative valence and their associations with effort during social interactions in real-life settings.

Before we continue, one important note concerning emotion valence is that both operational systems and effects of regulation of positive and negative emotion do vary; they are "*distinguished*" and *"not consistent*" (Nezlek & Kuppens, 2008). These crucial differences in emotional valence informed how we conceptualized, structured, and analysed our hypotheses, by examining positive and negative emotion regulation mechanisms separately, while controlling (accounting) for the other set of emotion valence in the study.

Current State of Research in Regulating Positive and Negative Emotion Expression

Based on the way researchers have previously categorized the study of emotion regulation (e.g. Parrott, 1993), we would examine response focused regulation according to the six mechanisms: 1) suppress positive expression; 2) suppress negative expression; 3) exaggerate positive expression; 4) exaggerate negative expression; 5) congruence (authentic) positive expression; and 6) congruence (authentic) negative expression. We present evidence concerning how these mechanisms would relate to effort in the order of suppression, exaggeration, and the congruence of emotion.

Suppression of Emotion Expression

We begin by presenting evidence of the most researched ER mechanism, the suppression of negative emotion expression. Research has documented that negative emotion expression suppression would generally lead to undesirable outcomes: cognitive cost of memory impairment (Richards & Gross, 2000); physiological cost, such as increase in blood pressure (Harris, 2001); and psychological cost, such as further activation of negative experience (Nezlek & Kuppens, 2008; Snyder, Heller, Lumian, & McRae, 2013), to name a few. Furthermore, suppression of negative emotion also yields social cost, such as lower performance in social functioning during social encounters (Gross & John, 2003; Butler et al., 2003). Despite the downsides of suppression, negative emotion suppression remains one of the most common regulations people use on a daily basis, perhaps due to a strong need to

regulate negative emotion in social context (Nezlek & Kuppens, 2008). As regulating negative emotion is known to be rather challenging to perform due to its intensity (Nezlek & Kuppens, 2008), research generally confirms the pattern that regulating negative emotion requires a lot of effort (Ochsner et al., 2004; Richards & Gross, 1999).

Next, despite being less focused in literature (Giuliani, McRae, & Gross, 2008), there were several studies devoted to the suppression of positive emotion (Gross & Levenson, 1997; Mauss et al., 2011). Supressing positive expression is known to lessen the rewarding positive experience itself (Nezlek & Kuppens, 2008). Similar to the findings of suppressing negative emotion, suppressing positive expression is still known to be destructive to individuals' well-being, self-esteem, psychological adjustment, and depressive symptoms (Mauss et al., 2011; Nezlek & Kuppens, 2008). Moreover, it was found that this mechanism could be linked to interpersonal outcomes, such as being less communicative in social interactions (Butler et al., 2003; Keltner & Kring, 1998). This mechanism is not as commonly employed as compared to suppression of negative emotion. When compared to the magnitude of suppression of negative emotion, suppression of positive emotion is commonly known to be less challenging and perhaps less effortful to regulate (Nezlek & Kuppens, 2008).

Exaggeration of Emotion Expression

When it comes to examining the cost of performing emotion regulation, exaggeration of emotion expression (both positive and negative) is relatively much less researched (Demaree, Schmeichel, Robinson, & Everhart, 2004). Often, the study of emotion exaggeration yielded quite conflicting results (Demaree et al., 2004; Demaree et al., 2006). Most of this line of research seems to concede the argument that all response-focused regulation, including the exaggeration of positive and negative expression, would yield negative consequences, such as depleted self-regulatory resources (Schmeichel, Demaree, Robinson, & Pu, 2006) and cognitive fluency (Schmeichel et al., 2006).

Research in the tradition of emotion labor indicates that exaggeration of positive emotion as part of a job requirement is considered as an effortful act at work. This argument is in line with display rule demand as well (Glomb & Tews, 2004). Exaggeration of positive expression is associated with stress and could lead to emotional exhaustion and burnout (Grandey, 2000; Grandey, 2003) and decreased social connectedness (Mauss et al., 2011). In general, exaggeration of any form is considered an effortful event, particularly pertinent in the line of research on emotion dissonance and emotion work. Some counter arguments related to the facial feedback hypothesis do exist (Buck, 1980), which implies that exaggeration of positive affect could yield more underlying positive experience; however, such claim is not supported by experimental studies (Demaree et al., 2004). In sum, according to research, exaggeration of positive emotion expression seems to be quite effortful for individuals.

Contradictory findings are even more apparent in the case of exaggerating negative expression; some research has suggested that exaggeration should yield no change in terms of sympathetic and parasympathetic arousal, and quite importantly, the underlying subjective experience of negative emotion should *not* be affected as a result of the regulation mechanism of exaggeration (Demaree et al., 2004; Muraven, Tice, & Baumeister, 1998; Schmeichel et al., 2006). However, evidence has been mixed; some studies demonstrated that exaggeration of negative emotion could lead to increased heart rate (Demaree et al., 2006), increased skin conductance (Adelmann & Zajonc, 1989), and decreased executive control (Schmeichel et al., 2006). Emotion labor research also portrays the requirement to show (or exaggerate) negative expression as an effortful requirement in certain occupations, such as in the case of police and tax collector (Rafaeli & Sutton, 1987). When comparing the conflicting findings, it is not really clear how exaggerating negative expression might relate to effort in social interactions.

Congruence of emotion expression

Now, we turn the focus to the congruence of emotion felt and emotion shown during social interactions. Most of the literature on emotion regulation seems to assume that emotion congruence is effortless (Glomb & Tews, 2004; Hülsheger & Schewe, 2011). However, some define congruence in terms of the emotion that is spontaneously felt, not specifically referring to appropriate ones, as demonstrated in the measurement items (e.g. "*the emotion I show customer come naturally*"). Due to such reason, we would like to add to the literature by discussing and examining how positive and negative emotion congruence might respectively influence effort in social interactions.

Positive emotion experience and expression are typically associated with less resource depletion. Empirical evidence seems to provide support that there is no relationship between congruence in positive emotion and emotional exhaustion (Glomb & Tews, 2004). The Broad and Build framework proposed by Fredrickson (2001, 2004) provided an explanation of how positive emotion could build and replenish resources, as well as facilitate people to cope with stress (Folkman & Moskowitz, 2000). In line with this approach, positive emotions could also yield benefits by undoing the adverse effect induced by negative emotions (Fredrickson, Mancuso, Branigan, & Tugade, 2000). Research findings indicated positive emotion in social interactions offers a protective physiological effect (Heaphy & Dutton, 2008) and might elicit more desirable intrapersonal and interpersonal outcome (Cote & Hideg, 2011; Lyubomirsky, King, & Diener, 2005; Staw, Sutton, & Pelled, 1994; Wong, Tschan, Messerli, & Semmer, 2013), such as enhanced psychological functioning, increased social connectedness (Mauss et al., 2011), increased trust (Dunn & Schweitzer, 2005), efficiency and problem solving (e.g. Isen, Daubman, & Nowicki, 1987). By considering these evidences, it seems that positive emotion congruence in social interactions might not be particularly effortful.

In contrast, given an intense need to deal with negative emotions (Barrett, Gross, Christensen, & Benvenuto, 2001), negative emotion experience in itself is known to deplete resources, as it demands quite a lot of our attention (Barrett et al., 2001; Gross et al., 2011). Negative emotion consumes physical (Fredrickson et al., 2000) and mental energy (Gross et al., 2011) and is related to fatigue after work(Gross et al., 2011). Not being able to regulate negative emotion could be quite costly (Quigley & Barrett, 1999); high negative emotion during interpersonal encounters is not only undesirable, it also affects the quality of the interaction (Lopes, Salovey, Côté, & Beers, 2005). Thus, there tends to be more motivation for people to regulate negative emotion (Barrett et al., 2001). Congruence of negative emotion, both felt and shown, is found to be linked with emotional exhaustion (Glomb & Tews, 2004). Venting negative emotion, in particular, is destructive to situational well-being and yields more psychosomatic complaints (Tschan, Rochat, & Zapf, 2005) and could even heighten the negative experience itself (Tice & Bratslavsky, 2000). Although there does not seem to be too many empirical studies that directly measure congruent negative emotion to effort, based on these related findings, it is not hard to speculate that congruent negative emotion would highly likely be related to effort.

Rationale of Our Study

After reviewing related evidence, it seems quite plausible that different ER mechanisms could yield different consequences in terms of their relationship to regulatory effort. As there still lacks a systematic study on this subject matter, our study serves the purpose of conducting exploratory analyses that could potentially clarify these doubts.

Only by assessing felt and displayed emotion distinctly, yet simultaneously, one can determine which emotion is being suppressed or exaggerated, as many common measures of response focused regulation (SA) do not assess which emotion is being regulated (exception: Glomb & Tews, 2004). Literature review informed us that in research involving self-report of

display regulation of emotion in real-life social interactions, researchers measured participants' regulation mechanisms directly without recording information on how they actually felt and/or what they actually showed. This problem has been a concern for quite some time (Lazarus, 2003). Indeed, the common research practice would be to ask participants to report to what extent they showed different emotion than they felt (Brotheridge & Lee, 2002; Zapf, Vogt, Seifert, Mertini, & Isic, 1999). Sample items were: *I control my emotions by not expressing them* (Gross & John, 2003). *Work hard to feel the emotions that I need to show to others* (Brotheridge & Lee, 2002). Although these items could directly capture and reflect the extent to which an individual performed emotion regulation, one limitation would be losing valuable information by *not* assessing both emotion experienced and emotion shown in the same occasion. Therefore, it is vital to obtain such crucial information, because underlying emotion experience could further determine the emotion regulation mechanisms used by that given emotion state and its other associated outcomes in the social interactions as a whole. As argued by Campos, Frankel, and Camras (2004, p. 379), the entity of emotion and emotion regulation differ "*analytically*" and "*conceptually*", even though their processes are very much conjoined. Nezlek and Kuppens (2008, p. 564) argued that "*the experience of particular emotions can affect the psychological resources needed to perform ER*." They further argued that the capacities to perform ER could, for instance, be enhanced by experiencing positive emotion.

To allow for a closer examination of studying the relationships between how different ER mechanisms relate to effort, this research paper employed polynomial multilevel analysis. One advantage of this method is that it maintains a multilevel structure where variations among participants could be taken into account. Additionally, it allows us to clearly investigate how emotion felt and shown might relate to effort when examining them *jointly* and *distinctly* in terms of their strength and direction (Shanock, Baran, Gentry, Pattison, &

Heggestad, 2010). The use of polynomials regression could allow researchers to consider both emotion felt and shown, thus to determine the effect of suppression, exaggeration, and congruence simultaneously without losing critical information or restraining the analyses to certain regulation mechanism(s).

Present Study

The current study aims to tackle the abovementioned issues by using a combination of polynomial regression and multilevel modelling analyses. Although research informed that regulation of emotion expression is effortful in general, this study explores and determines the specific response focused ER associated with high effort. Our main research questions were: a) Among the mechanisms of response-focused regulation we discussed, which are related to effort? b) In circumstances of congruence in which authentic emotion is displayed, would positive or negative emotion relate to effort?

Even though employing emotion regulation mechanisms concerning positive and negative emotion could be psychologically taxing, empirical evidence suggests these mechanisms work under very different premises (Gross & Levenson, 1997). Majority of arguments and research evidence lead to an important conclusion that positive and negative emotion and its subsequent regulation should be studied separately (Nezlek & Kuppens, 2008), as argued similarly by recent research that positive and negative ER have different properties and thus operate quite differently as a result of such valence asymmetries (Snyder et al., 2013).

In relation to formulating hypotheses regarding valence and effort, most literature suggests people tend to "*maximize good emotions and eliminate bad ones*" (Campos et al., 2004, p. 378), and these findings do extend across culture (Diener, 2000; Mauss & Tamir, 2014). According to this hedonistic perspective, people tend to strive for positive constructive interactions in most social encounters (Parrot, 1993). In particular, Gross (2015) argued that

in our daily lives, the most common goal of ER seems to be suppressing negative emotion followed by exaggerating positive emotion. Along this line of reasoning, we expect that the mechanisms of: a) exaggerating positive emotion, b) suppressing negative emotions (Tamir & Mauss, 2011; Västfjäll, Gärling, & Kleiner, 2001), as well as c) congruent negative emotion are in relevance of being effortful, as these are corresponding circumstances, which require individual's attention to modify those emotions (Barrett et al., 2001). So far, the research evidence we have discussed seems to also support that mechanisms of suppressing negative and exaggerating positive emotion are reported as particularly effortful (see Gross, 2015), whereas it is not as clear in the case of exaggerating negative and suppressing positive. In terms of emotion congruence, research seems to support that negative emotion is highly effortful due to how it greatly demands our attention and cognitive resources (Gross et al, 2011), whereas positive emotion does not seem to do so.

Hypotheses

Summing all the above arguments, we hypothesize that exaggeration of positive emotion expression and suppression of negative emotion expression are associated with high degree of effort. We also posit that a high congruence negative felt and shown is related to effort, probably because of the need to attend to such emotion (Barrett et al., 2001); on the contrary, a high congruence positive felt and shown associates with a low degree of effort due to a lesser requirement to regulate. Thus, we expect the following results:

Hypothesis 1. When positive emotion felt and shown are in agreement and in high intensity, meaning that congruent (genuine) high level of positive emotion was being felt and shown, regulatory effort is low.

Hypothesis 2. When positive emotion felt and shown are in disagreement, in the case where there is an exaggeration of positive emotion shown (positive shown is higher than felt), regulatory effort is high. To the extent that positive emotions are exaggerated, the intensity of effort increases.

Hypothesis 3. When negative emotions felt and shown are in agreement and in high intensity, meaning that genuine high level of negative emotion was being felt and shown, i.e. venting of negative emotion, effort is high.

Hypothesis 4. When negative emotion felt and shown are in disagreement, in the case where there is a suppression of negative emotion shown (negative shown is lower than felt), effort is high. To the extent that negative emotions are suppressed, the intensity of effort increases.

Method

Participants and Procedures

115 French-speaking Swiss participants were recruited for the study using snowball recruitment by research assistants. 71 were female. At the intake of the study, participants were asked to complete a general questionnaire in regard to their demographics and personality. Then, they were given seven individual daily booklets containing a variant of the Rochester Interaction Record (RIR) to report their daily social interactions (Reis & Wheeler, 1991). For seven consecutive days, they were asked to record each of their social interactions that were important or that were longer than ten minutes in duration in their private and work lives. They were asked to mail back the booklets, using a return envelope as soon as they completed the booklet for the day. In a course of seven days, a total of 3,407 social interactions were collected. Interactions consisted of 1,832 episodes in their private lives, whereas 1,535 were reported in the workplace.

Measures

Individual Questionnaire. A number of individual variables were controlled in our study. They included gender, age, extraversion, and neuroticism. Age (Gross et al., 1997) and gender (e.g. Cousin & Schmid-Mast, 2013) were controlled as they are well-known for their differences in emotion experience and emotion expression. Extraversion (Cronbach's alpha = .73) and Neuroticism (Cronbach's alpha = .79) were controlled because of how these variables are related to emotional performance (Bono & Vey, 2007), emotion expressiveness (Riggio & Riggio, 2002), and display rule perception (Diefendorff & Richard, 2003).

Social Interaction Record. In each of the social interaction records, participants were required to fill in basic information, such as the context of the interaction, duration, and interaction partner(s). The dependant variable regulatory effort was recorded by asking the participant, "*During this social interaction, have you/did you spent lots of effort in managing your emotions?*" Predictor variables, emotion felt and emotion shown, were recorded using two distinct sets of Geneva Emotion Wheel (Scherer, 2005). The instrument is well validated and is easy to use under limited time constraint (Scherer, Shuman, Fontaine, & Soriano, in press; Tran, 2004). Each emotion wheel contains 20 discrete emotions, and their intensity from level 1 to 4. Participants indicated the respective emotion in which they had felt/shown and the intensity of the associated emotion during the social interaction. When certain emotion(s) were not checked by the participants, they would be coded as "0". To run the analyses, means of emotion felt and emotion shown were computed separately, as well as the valence dimension of emotion. Positive emotion included interest, happiness, pride, joy, pleasure, tenderness, enthusiasm, relief, and compassion. Negative emotion included anger, contempt, disgust disappointment, anxiety, sadness, embarrassment, shame, and guilt. The primary advantage of using GEW is how it allows researchers to study emotion valence in detail (Nezlek & Kuppens, 2008). Additionally, instead of restraining to specific ER

mechanism (i.e., asking the participant to directly report the kind of ER they adopted), the GEW measures what emotion the participant(s) felt and showed, as well as how intense it was for them. Comparing the results of the two wheels allows researchers to examine discrepancies between emotion felt and shown to determine precisely what kind of ER they adopted and to what extent they regulate their expressions (such as exaggerating mildly or enormously, and supressing mildly to supressing enormously).

Analyses

A combination of multilevel and polynomial regressions were employed in the analyses. Multilevel structure was necessary because of how social interactions (Level 1) were nested within each individual (Level 2). Null model confirmed that a multilevel analysis was appropriate. ICC between individuals was 17.44% (Wald $Z = 6.19$, $p < .001$). Polynomial regression analyses were essential to our investigation as we could examine how both emotion felt and emotion shown dimensions would affect effort when they were congruent and when they differed (i.e., discrepancies). Analyses were tested separately for positive and negative emotions. However, as both positive emotion and negative emotions might influence social interactions, we thus controlled for the other emotion valence[1].

Centering decisions were based on recommendations from recent research methodologies. Variables of individual's (Level 2) age, extraversion, and neuroticism were grand mean centered, as argued accordingly in Enders and Tofighi (2007). Variables of social interactions (Level 1), such as emotion felt/shown and effort, were grand mean centered

[1] For polynomials regression on positive emotions on regulatory effort, for level 1 variables, we entered POSITIVE FELT + POSITIVE SHOWN + POSITIVE FELT x POSITIVE SHOWN + POSITIVE FELT ^{2} + POSITIVE SHOWN^2 + NEGATIVE FELT + NEGATIVE SHOWN. Similarly, for polynomials regression ran for negative emotions on regulatory effort, for level 1 variables, we entered NEGATIVE FELT + NEGATIVE SHOWN + NEGATIVE FELT x NEGATIVE SHOWN + NEGATIVE FELT^2 + NEGATIVE SHOWN^2 + POSITIVE FELT + POSITIVE SHOWN.

around the mean of positive and negative emotion felt, following the methodology recommendation for polynomial regressions (Edwards & Parry, 1993). This is because we had to center around the mean where emotion felt and emotion shown converged to establish a precise line of converges and discrepancies (See Edwards & Parry, 1993). Categorical variables, such as gender and context (private vs work interaction), were not centered.

Results

Table 1 contains means, standard deviations, and correlations for all variables in our analyses. According to Shanock et al. (2010), knowing the percentage of agreement and discrepancies is crucial in polynomial regression analyses. With this preliminary information, we could understand whether discrepancies were present in our sample.

Table 2 contains the frequencies of positive emotion felt level over, under, and in-agreement with positive emotion shown level needed for polynomial regression analysis. Table 3 contains the frequencies of negative emotion felt level over, under, and in-agreement with negative emotion shown level needed for polynomial regression analysis. As shown, for both positive and negative emotions, more than half of the cases reported were not authentic, i.e., more than half of the cases were response focused regulation, which demonstrated that polynomial analyses was valuable and necessary for this set of data (Shanock et al., 2010).

Predicting Regulatory Effort from Positive Emotion Felt and Shown

Table 4 presents the results of multilevel polynomial regression, demonstrating the effect of positive emotion felt and shown to effort. Polynomials graphs plotted in Figure 1.

In regard to Hypothesis 1, when positive emotion felt and shown were in agreement and in high intensity, meaning a genuine high level of positive emotion was being felt and shown, effort was low. $a1$ tested how agreement of positive felt and positive shown was

related to effort. Unstandardized beta coefficient of *a*1 is -.23, *SE*= .03, *p* <.001 , meaning that the decrease in effort was associated with the increase of positive felt and positive shown, when the two variables were in agreement with each other. *a*2 tested whether agreement between positive felt and positive shown was associated to effort in a curvilinear way. The coefficient of the *a*2 slope is *b*=.16, *SE*=.03, *p* <.001. The positive coefficient suggested an upward convex shape along line of agreement of positive felt and positive shown, implying that the decrease in effort is was stronger in the initially and then levels levelled off at higher values of positive emotions congruence. These findings illustrate that genuine positive emotion expression is was related to a lower effort. H1 was supported.

In regard to Hypothesis 2, when positive emotion felt and shown were in disagreement, in the case where there was an exaggeration of positive emotion shown (positive shown is higher than felt), effort was high. *a*3 tested how direction of the disagreement between positive felt and positive shown was related to effort. Unstandardized beta coefficient of *a*3 is -.29, *SE*= .11, *p* <.001, meaning that a stronger increase in effort was associated with conditions when the positive shown was higher than the positive felt, as compared to conditions when positive felt was higher than positive shown. This finding illustrates that exaggerating positive expression was related to a higher effort than suppressing positive expression. Moreover, when the intensity of exaggeration of positive emotion expression increased, effort increased. *a*4 tested how degree of discrepancies between positive felt and positive shown related to effort. Unstandardized beta coefficient of *a*4 is .56, *SE*= .19, *p* <.001. The significant positive slope suggested a convex surface, meaning that effort increased more sharply as degree of discrepancies between positive felt and positive shown increased. This finding illustrates that when the participants exaggerated their positive expression more intensely, their effort increased more rapidly. H2 was supported.

Predicting Regulatory Effort from Negative Emotion Felt and Shown

Table 5 presents the results of multilevel polynomial regression, demonstrating the effect of negative emotion felt and shown to effort. Polynomials graphs plotted in Figure 2.

In regard to Hypothesis 3, when negative emotions felt and shown are were in agreement and in high intensity, meaning that genuine high level of negative emotion was being felt and shown (in case of "venting" of negative emotion), effort is was high. *a*1 tests tested how agreement of negative felt and negative shown is was related to effort. Unstandardized beta coefficient of *a*1 is 1.92, *SE*= .10, $p < .001$, meaning that the increase in effort is was associated with the increase of negative felt and negative shown, when the two variables are were in agreement with each other. *a*2 tests tested whether agreement between negative felt and negative shown is was associated to effort in a curvilinear way. The coefficient of the *a*2 slope is positive, *b*= -.82, *SE*=.08, $p < .001$. The negative coefficient suggested a downward concave shape along line of agreement of negative felt and negative shown, implying the increase in effort was stronger initially and then levelled off at higher values of negative emotions congruence. These finding illustrate that genuine negative emotion expression was related to a higher effort. H3 was supported.

In regard to Hypothesis 4, when negative emotion felt and shown were in disagreement, in the case where there was a suppression of negative emotion shown (negative shown is lower than felt), effort was high. *a*3 tested how direction of the disagreement between negative felt and negative shown was related to effort. Unstandardized beta coefficient of *a*3 is 2.44, *SE*= .26, $p < .001$, meaning a stronger increase in effort was associated with conditions when the negative felt was higher than the negative shown, as compared to when negative shown was higher than negative felt. This finding illustrates that suppressing negative expression was related to a higher effort than exaggerating negative expression. Moreover, when the degree/intensity of suppression of negative emotion expression increased, effort increased. *a*4 tested how the degree of discrepancies between

negative felt and negative shown related to effort. Unstandardized beta coefficient of *a*4 is 1.11, *SE*= .44, *p* =.01; the significant positive slope suggested a convex surface, meaning effort increased more sharply as degree of discrepancies between negative felt and negative shown increased. This finding illustrates that when the participants suppressed their negative expression more intensely, their effort increased more rapidly. H4 was supported.

Discussion

The main purpose of the study was to conduct an exploratory analysis by using the combined method of multilevel and polynomials regression to systematically study how all spectrum of response-focused regulation mechanisms during real-life social interactions might be associated with the individuals' regulatory effort, and while doing so, *without* losing any critical information of felt and displayed emotion. Largely based on the hedonistic approach of emotion, we hypothesized that, generally, exaggeration of positive emotion and/or low degree of congruent positive emotion felt and shown, as well as suppression of negative emotion, and/or high degree of congruent negative emotion felt and shown (venting) would be associated with effort because of the likelihood and necessity to properly regulate them during the majority of social contexts. All of our hypotheses were supported. These analyses informed us of several critical findings as seen below:

1) The response focused ER of exaggeration of positive emotion expression and suppression of negative emotion expression are associated with higher effort. In addition, the more intense the abovementioned regulation needed, the higher the effort.

2) A high authentic negative emotion felt and shown (venting) is associated with higher effort, whereas high authentic positive emotion felt and shown is associated with lower effort.

This study is primarily exploratory in nature, yet these results conform and comply to existing findings from emotion literature and further added new insights to inform us which

specific emotion regulation mechanism is more effortful – the suppressing negative emotion expression (downregulation), as well as the exaggerating of positive emotion (upregulation). Although results from positive and negative emotions and their regulations were confirmed, according to their respective manners, it should be well noted that the effect of negative emotions on effort are generally much stronger than the effect of positive emotion. Specifically, a) the *a1* line of agreement suggests that high congruent negative emotion felt and shown (b= 1.92, SE = .10, $p < 0.01$) relates to effort stronger than the low congruent positive emotion felt and shown (b= -.23, SE = .03, $p < 0.01$); b) along the *a3*, the line of disagreement, the results suggest that the effect of suppression of negative emotion (b= 2.44, SE = .26, $p < 0.01$) is much stronger than the effect of exaggeration of positive emotion (b= -.29, SE = .11, $p < 0.01$); and c) the *a4* curvature of the line of disagreement suggests that the intensity of *discrepancies* for emotion felt and emotion shown for negative emotions (b= 1.11, SE = .44, $p < 0.01$) have a greater influence on effort than the intensity of discrepancies for positive emotions (b= .56, SE = .19, $p < 0.01$). In addition to these above trends of how negative emotion and its regulation could be more predictive on effort as compared to the influence of positive emotion and its regulation, the results also informed us that *not* only these response focused regulation itself are effortful, but also, in circumstances when the underlying feeling of the people are infused with high amount of negative emotion and/or not sufficient positive emotion (Gross et al., 2011). This is particularly apparent in the case of venting, a form of emotional deviance (Tschan et al., 2005)- a violation in display rule infused with high negative emotion felt and shown. Despite some literature suggesting that venting might be a potentially healthy coping strategy for individuals to release tension build-up (John & Gross, 2004), other literature pointed out that venting might not actually help with reducing the underlying negative emotion, in fact, quite the opposite. As venting focuses our attention "*in the wrong place*", it might aggravate such negative experience (for more discussion, see

Tice & Bratslavsky, 2000). Our results seem to support the latter (*a1* of negative emotion: b= 1.92, SE = .10, $p < 0.01$) by demonstrating that venting could be related to high intense effort.

All of these findings, as a whole, could possibly be explained by the hedonistic approach of emotion regulatory goals. Although causality could not be drawn from this study, the above findings could further suggest the possibility of a general inclination for people to strive for positive prosocial interactions in both their private and work lives. And when they are not feeling these emotions naturally, they do so by regulating their emotion expression when interacting with others by showing positive emotion expression and hiding negative emotion expression, as these specific emotion regulatory mechanisms are clearly associated with effort.

In regard to scientific contribution, this study contributes to help provide new methodological alternatives in emotion and emotion regulation research. Studying both emotion felt and emotion expressed together by using polynomial regression gives us a comprehensive picture of how these two connected, yet distinct, variables would interact and reveal the emotion regulatory mechanism accurately without the prior need to limit the study, by only investigating one or two specific ER mechanisms. Furthermore, the use of polynomial helped us to avoid losing credible information, such as the emotion experience itself, which, in our opinion, is absolutely necessary to be understood in the first place to investigate/speculate what subsequent appropriate ER mechanism should follow. Last, with the help of the structure of GEW, we can now study both positive and negative emotions simultaneously in the same statistical model without needing to confine it to only studying one valence of emotion and its associated regulation.

So far, we have pointed out the methodological strength of our study. Yet, this study proses several limitations. First, data was collected on Swiss French speaking participants;

thus, the findings should not be generalized across all cultures, as research suggests that emotion and emotion regulation mechanism could differ cross-culturally (for more discussion, see Tice & Bratslavsky, 2000). Another closely linked problem is that we studied over three thousand social interactions; therefore, the findings are generalized across social setting, and they do not account for less common social interactions that are not prosocial in nature or are confined to very specific display rules. For instance, they would not depict social interactions in which the use of anger or sadness might be useful for instrumental purposes (Matsumoto, 2010). The findings in the study should not be generalized across all social contexts. It is an important point to be aware, as research has shown that emotion regulation is largely dependent on specific social context (Tamir, Mitchell, & Gross, 2008), and recent research investigated the asymmetry effect of valence (e.g. Snyder et al., 2013), which offered a different take and explanation on studying emotional valence. This perspective moved away from the hedonistic approach of ER. Next, a typical limitation that is concurrent in self-reported research is common method variance (Van Kleef, 2014); however, it has been argued that complex regression analyses, like the one we used, could reduce or eliminate such bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). And last, causality should not be determined as a result of the self-reporting nature of the field study.

Final Remark

All in all, this paper could be the first to employ polynomial regression to explore the way positive and negative emotion felt and emotion shown could be jointly and distinctly related to effort during social interactions. Due to such methodological progress, we can now clearly determine the effect of suppression, exaggeration, and congruence of emotion without constraining the research to particular regulation mechanism(s).

Table 1. Means, Standard Deviations and Correlations for Measures

	Range	M	SD	1	2	3	4	5
Level 2 Individual Variables								
Gender	Female = 0, Male =1	0.38	0.49	1				
Age	18-66	34.69	14.22	-.10	1			
Extraversion	1-6	4.19	.83	-.02	-.22*	1		
Neuroticism	1-6	2.80	.80	-.22*	.12	-.23*	1	
Level 1 Social Interaction Variables								
Positive Emotion Felt	0-4	.99	.73	1				
Positive Emotion Expressed	0-4	.91	.68	.86**	1			
Negative Emotion Felt	0-4	.20	.39	-.15**	-14**	1		
Negative Emotion Expressed	0-4	.11	.27	-.10**	-.12**	.77**	1	
Regulatory Effort	1-5	1.73	1.13	-.17**	-.11**	.50**	.31**	1
Private VS Working Setting	Private = 0, Work = 1	.56	.50	-.19**	-.16**	.00	-.14*	.05**

Note. N = 115 for Individuals; N= 3407 for Social Interactions in Private and Work Settings

† p <.10, * p <.05 , ** p <.01 (two-tailed)

Table 2. Frequencies of Social Interaction where Positive Emotion Shown level Over, Under and In-Agreement with Positive Emotion Felt

Agreement Groups	Frequency	Mean Positive Shown	Mean Positive Felt
Positive Shown more than Positive Felt (Exaggeration of Positive Expression)	796	1.15	0.81
In Agreement (Authentic Positive Expression)	1240	0.77	0.77
Positive Shown less than Positive Felt (Suppression of Positive Expression)	1337	0.91	1.29

Table 3. Frequencies of Social Interaction where Negative Emotion Shown level Over, Under and In-Agreement with Negative Emotion Felt

Agreement Groups	Frequency	Mean Negative Shown	Mean Negative Felt
Negative Shown more than Negative Felt (Exaggeration of Negative Expression)	120	0.59	0.36
In Agreement (Authentic Negative Expression)	922	0.04	0.04
Negative Shown less than Negative Felt (Suppression of Negative Expression)	896	0.21	0.61

Table 4. Predicting Regulatory Effort in Social Interactions from Positive Felt and Positive Shown

Variables	Estimate(SE)
Intercept	1.51(.05)**
Level 2 (Grand Mean Centered)	
Gender (Female = 0, Male = 1)	.19(.08)*
Age	.01(.00)*
Extraversion	-.02(.05)
Neuroticism	.09(.05)†
Level 1 (Grand Mean Centered)	
Positive Felt	-.26(.06)**
Positive Shown	.03(.06)
Positive Felt X Positive Shown	-.20(.09)*
Positive Felt²	.16(.05)**
Positive Shown²	.20(.07)**
Control Variables	
Private VS Work Interaction	.01(.03)
Negative Felt	1.64(.07)**
Negative Shown	-.71(.10)**
Log -2 Likelihood	8592.41
Surface Test	
a1 (line of agreement for positive felt and shown)	-.23(.03)**
a2 (curvature of line of agreement for positive felt and shown)	.16(.03)**
a3 (line of disagreement for positive felt and shown)	-.29(.11)**
a4 (curvature of line of disagreement for positive felt and shown)	.56(.19)**

N= 115 employees, n = 3243 social interactions at private and work setting. Categorical variables are not centered.

Note. † p <.10, * p <.05, ** p <.01. Tests are all two-tailed.

Log -2 Likelihood for Model without polynomials is 8629.74

Table 5. Predicting Regulatory Effort in Social Interactions from Negative Felt and Negative Shown

Variables	Estimate(SE)
Intercept	1.75(.06)**
Level 2 (Grand Mean Centered)	
Gender (Female = 0, Male = 1)	.18(.08)*
Age	.01(.00)*
Extraversion	-.03(.05)
Neuroticism	.08(.05)
Level 1 (Grand Mean Centered)	
Negative Felt	2.18(.12)**
Negative Shown	-.26(.16)†
Negative Felt X Negative Shown	-.97(.23)**
Negative Felt²	-.47(.10)**
Negative Shown²	.62(.17)**
Control Variables	
Private VS Work Interaction	0.02(.03)
Positive Felt	-.16(.05)**
Positive Shown	.05(.05)
Log -2 Likelihood	8453.07
Surface Test	
a1 (line of agreement for negative felt and shown)	1.92(.10)**
a2 (curvature of line of agreement for negative felt and shown)	-.82(.08)**
a3 (line of disagreement for negative felt and shown)	2.44(.26)**
a4 (curvature of line of disagreement for negative felt and shown)	1.11(.44)**

N= 115 employees, n = 3215 social interactions at private and work setting. Categorical variables are not centered. Note. † p <.10, * p <.05, ** p <.01. Tests are all two-tailed.
Log -2 Likelihood for Model without polynomials is 8629.74.

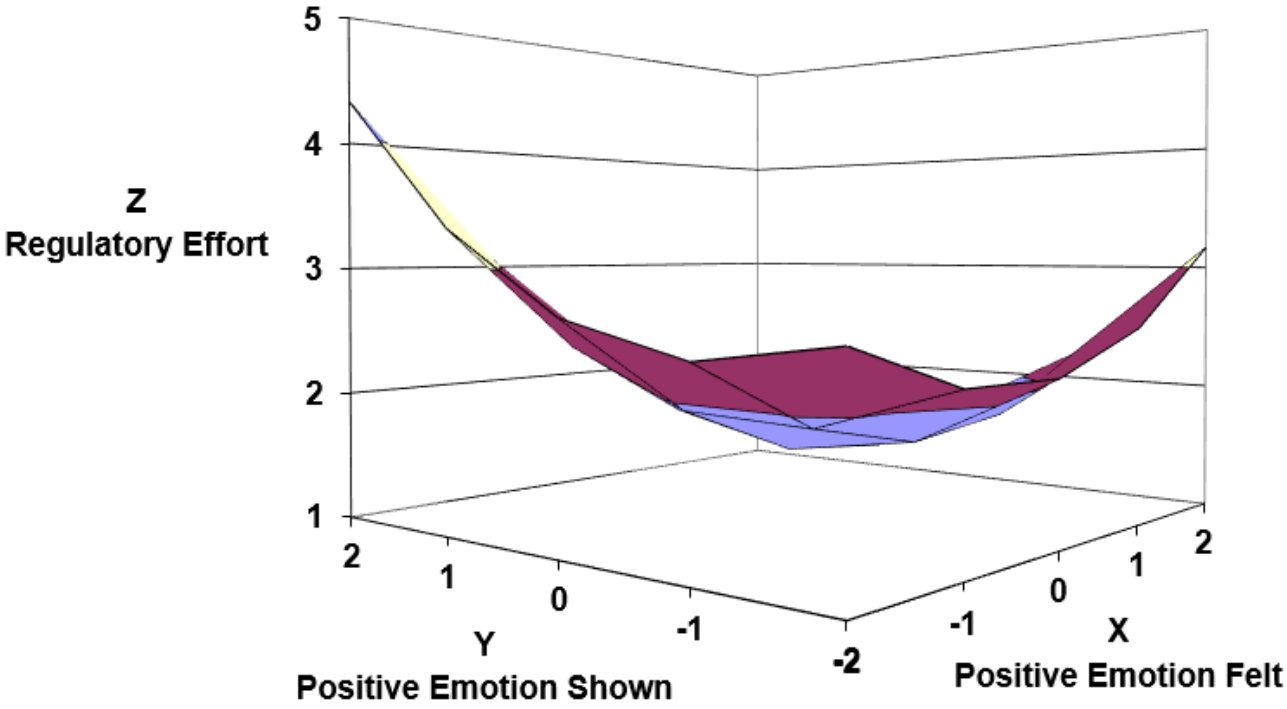

Figure 1. Predicting regulatory effort by *positive* emotions felt and shown during social interactions

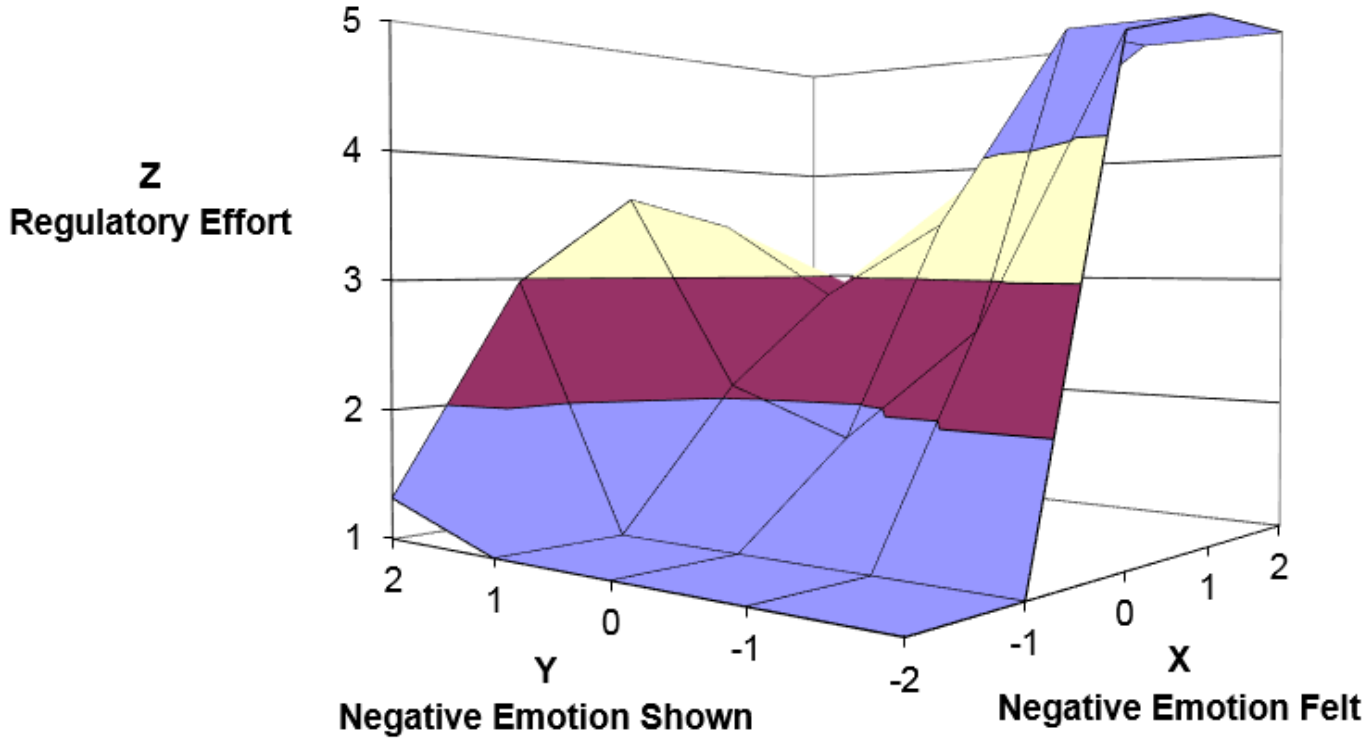

Figure 2. Predicting regulatory effort by *negative* emotions felt and shown during social interactions

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Chapter 5

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Expressing and amplifying positive emotions facilitate goal attainment in workplace interactions

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Expressing emotions has social functions; it provides information, affects social interactions, and shapes relationships with others. Expressing positive emotions could be a strategic tool for improving goal attainment during social interactions at work. Such effects have been found in research on social contagion, impression management, and emotion work. However, expressing emotions one does not feel entails the risk of being perceived as inauthentic. This risk may well be worth taking when the emotions felt are negative, as expressing negative emotions usually has negative effects. When experiencing positive emotions, however, expressing them authentically promises benefits, and the advantage of amplifying them is not so obvious. We postulated that expressing, and amplifying, positive emotions would foster goal attainment in social interactions at work, particularly when dealing with superiors. Analyses are based on 494 interactions involving the pursuit of a goal by 113 employes. Multilevel analyses, including polynomial analyses, show that authentic display of positive emotions supported goal attainment throughout. However, amplifying felt positive emotions promoted goal attainment only in interactions with superiors, but not with colleagues. Results are discussed with regard to the importance of hierarchy for detecting, and interpreting, signs of strategic display of positive emotions.

Keywords: positive emotion, emotion regulation, goals, social interactions at work, superior, coworker, organizations

INTRODUCTION

If an employe pursues a specific goal in an encounter with his or her superior, will the expression of emotions make a difference for goal attainment? Specifically, will expressing *positive* emotions help goal attainment in this situation? If the employe feels slightly positive, is amplifying the expression of these feelings useful for reaching the goal? Would such a strategy also work in interactions with colleagues? In this paper, we investigate whether (a) the expression and (b) the amplification of positive emotion influence goal attainment in interactions with colleagues and superiors at work.

As will be reviewed in more detail below, research on emotions suggests that emotions and emotion regulation are related to interpersonal consequences in general (e.g., Gross and John, 2003); and to reaching goals specifically (e.g., Scherer et al., 2001); this applies also in the organizational context (e.g., Barsade and Gibson, 2007). On the one hand, *experiencing* positive emotions has been found to foster favorable outcomes in general (e.g., Lyubomirsky et al., 2005) and in the organizational context (for a review, see Ashkanasy, 2003), and to promote proactive goal pursuit in individuals (Bindl et al., 2012). In addition, there also is work on how experiencing emotions by focal persons affects others; the main mechanism by which these effects occur is emotional contagion, which involves a more or less automatic transmission of affective cues to perceivers who, in turn, process, and mimic, these cues more or less automatically as well (e.g., Barger and Grandey, 2006).

Research on *displaying* affect more deliberately comes from two traditions, which are impression management (e.g., Schlenker and Weigold, 1992) and emotional labor (Grandey, 2000). Both support the assumption that expressing positive affect fosters positive social encounters. Among the latter is research on "leading with emotional labor" (e.g., Humphrey et al., 2008; Ashkanasy and Humphrey, 2011b); however, we know much less about how employes try to influence their superiors through affective display, and how that kind of influence compares to effects on peers. Research on emotional labor typically focuses on suppressing emotions one feels and on expressing emotions one does not feel (emotional dissonance, cf. Grandey et al., 2012), but the exaggeration or up-regulation of emotions is often considered part of emotional labor as well (Grandey, 2000).

Up-regulation of positive emotions is arguably especially important for employes low in power, as they are more dependent on creating a positive impression in high-power individuals, who have more means at their disposal to achieve their goals (for instance, they can use negative emotions; Cote et al., 2013). At the same time, exaggerating positive emotion display may increase the danger of appearing inauthentic, which may undermine the intended effects (Liu and Perrewe, 2006). So the question arises whether it may be more effective to just show the positive emotion that is felt, thus delivering a milder, but authentic positive emotion display. We propose that the danger of appearing inauthentic increases to the extent that one has a closer relationship

with the interaction partner, which implies that up-regulating positive emotions should be more effective toward supervisors than toward colleagues.

The current study therefore focuses on (a) experiencing and (b) amplifying positive emotions as a means to achieve goals in naturally occurring social interactions at work, assuming that both have different effects on colleagues versus superiors. We focus on the use of positive emotions and their amplification because expressing negative emotions is conducive to goal attainment only in special circumstances (Cote et al., 2013), whereas positive emotions are likely to foster goal attainment almost ubiquitously. The question of authenticity when expressing positive emotions one does not feel has been the focus of quite some research (Hochschild, 1983; Ashforth and Humphrey, 1995; Grandey et al., 2005a). In the context of positive emotions one *does* feel, up-regulating them in one's display has special implications for the issue of authenticity, in that amplification would seem less necessary if one already feels positive emotions; it therefore may be less effective to up-regulate them in one's display and thus take the risk of appearing inauthentic.

Our article unfolds as follows: we first discuss how the social functions perspective on emotions can help in explaining the effect of expressing and amplifying positive emotions on goal attainment. We then discuss empirical research concerning the display of positive emotions in relation to goal attainment at work. Finally, we present arguments that such an effect may depend on different interaction partners, specifically, superiors or colleagues.

EXPRESSING POSITIVE EMOTION AND GOAL ATTAINMENT IN INTERACTIONS: MECHANISMS

With regard to the processes underlying the effect of expressing and managing emotions on goal attainment, we draw on research related to the social functions of emotions, particularly to their informative, influential, and affiliative functions.

First, according to the Emotion as Social Information Model, expression of emotions is a source of information for interaction partners (Van Kleef, 2010; see also Izard, 1977; Ekman, 2003; Cote, 2005). Emotional expression provides information about one's goals, motivation, and intentions (Van Kleef, 2010, p. 16). Displayed positive emotions signals tendencies to approach a goal (Lyubomirsky et al., 2005), social readiness (Shiota et al., 2004), and the intention to engage in pleasant social interactions (e.g., Keltner and Kring, 1998); these elements are likely to influence an interaction partner to react favorably (Lopes et al., 2005).

Second, expressing emotions is a form of social influence that evokes responses in the interaction partner(s) with regard to attitudes, emotions, thoughts, and behaviors (Kopelman et al., 2008; Niven et al., 2009; Côté and Hideg, 2011). Positive expression conveys a favorable impression (Harker and Keltner, 2001), for instance in terms of friendliness and competence (Barger and Grandey, 2006), which enhances in others the tendency to conform and comply (Cialdini and Goldstein, 2004). Positive expression such as laughter could work as an incentive to induce desirable behavior in others (Staw et al., 1994; Morris and Keltner, 2000).

Furthermore, as mentioned above, expressed emotions influence the *emotions* of others (Zapf, 2002; Niven et al., 2011) via contagion (Hatfield et al., 1994), social appraisal (Zaalberg et al., 2004; Parkinson and Simons, 2009), and social sharing of emotions (Rimé et al., 1998). According to Fredrickson (1998, 2004), positive emotions felt broaden people's thought-action and behavioral repertoires; these broadened thoughts and behaviors could further promote goal pursuit. Positive mood is also linked to a higher probability of prosocial behaviors (Batson and Powell, 2003; Potworowski and Kopelman, 2008), and it triggers more helping and support (Isen and Simmonds, 1978; George, 1991), more reciprocity (Gouldner, 1960; Walter and Bruch, 2008), more information sharing (Baron et al., 1990, 1992), and also higher tendencies to seek integrative solutions (Forgas, 1998). Barsade (2002) found that the expression of positive emotions by a group member not only might "*ripple out*" among members of the group, it further predicts improved cooperation, decreased conflict, and increased perceived task performance in group setting.

Finally, goal attainment could also be fostered through forming and maintaining good relationships due to the presence of positive emotions in the interactions (Manstead and Fischer, 2000; Shiota et al., 2004). Expressing positive emotions is seen as an affirmation of an agreeable relationship (Fisher and Shapiro, 2006), which enhances social connectedness (Mauss et al., 2011), strengthens group attachment (Lawler, 1992), increases trust (Dunn and Schweitzer, 2005), and improves the emotional climate in groups (Scherer and Tran, 2003). For example, Sy et al. (2005) found that leader's positive mood could induce positive mood in the team members, and create a positive affective tone in the group. All these effects from positive expression could further foster cooperation (Fischer et al., 2004) and encourage desired behavior in others (Ashkanasy and Humphrey, 2011b); thus, they are likely to foster goal attainment in interactions.

EXPRESSING POSITIVE EMOTIONS AND GOAL ATTAINMENT IN INTERACTIONS: EVIDENCE

Evidence indicating that the expression and amplification of positive emotions could be helpful for attaining goals in interactions at work comes from three sources. First, research on *impression management* explains how people convey a specific, most often a desirable, image of themselves upon others in order to influence outcomes at work (Giacalone and Rosenfeld, 1989; Schlenker and Weigold, 1992). Successful goal pursuit in organizations is influenced by how well people present themselves, interact with and work with others, particularly with their superior and colleagues (Baumeister, 1989). Impression management helps building a positive professional image (Roberts, 2005) and has been found to be related to positive outcomes such as overall career success (Judge and Bretz, 1994), higher salary (Kipnis and Schmidt, 1988), and better performance evaluations (Higgins et al., 2003). Impression management research does not specifically focus on emotions, as employes use various impression management strategies to accomplish goals (Kipnis et al., 1980; Rosenfeld et al., 1995). However, managing emotion expression is one of those strategies (Jones and Pittman, 1982; Grandey et al., 2005a; Andrade and Ho, 2009). Specifically, the two strategies of impression management that have been shown to have the most consistent effects are ingratiation and flattery (e.g., Kipnis and Schmidt, 1988); both imply the expression of positive emotions (Higgins et al., 2003; Harris et al., 2007), and are often used in interactions with superiors (Baumeister, 1989). Second, research *on emotion work* or *emotional*

labor (Hochschild, 1979; Zapf and Holz, 2006) has found that the regulation of emotions helps reaching goals during social interactions in organizations, with a particular focus on interactions with clients (Mesmer-Magnus et al., 2012). This line of research shows that displaying positive emotions often leads to favorable outcomes in interactions with clients (e.g., Barger and Grandey, 2006). Expressing positive emotions is associated with more task effectiveness (Rafaeli and Sutton, 1989; Ashforth and Humphrey, 1993), higher customer satisfaction (Pugh, 2001), higher perceived service friendliness, higher chances of customers to return to a store (Tsai, 2001), and better financial outcomes such as higher sales and more tips (Rafaeli and Sutton, 1987). A third tradition indicating that the expression of positive emotions may be helpful in social interactions focuses on emotional contagion (Pugh, 2001; Barsade, 2002; George, 2002; Barger and Grandey, 2006). Research in this area shows that people who experience positive emotions often transmit these emotions to others, which typically has positive effects. However, evidence from this tradition is more indirect, in that its main focus is not on deliberate attempts at transmitting positive emotions.

Together, research on impression management, on emotion work, and on emotional contagion indicate that expressing positive emotions at work may help employes to attain their goals. Furthermore, this research suggests that it is the emotion *expressed*, regardless of the emotion *felt*, that is crucial for the desired effect (Andrade and Ho, 2009), provided that the emotional expression is perceived as authentic and the truly felt emotion does not "leak" through (Grandey et al., 2005a; Liu and Perrewe, 2006; Cote et al., 2013).

With regard to the effect on goal attainment of displaying positive emotions in everyday interactions at work, both impression management research and emotional labor research have some important limitations. The impression management literature describes a very broad array of self-presentation strategies – including appearance, communication content, and behavior (Kipnis et al., 1980); each of them encompasses much more than the display of emotions. The display of positive emotions is implied in some of the tactics described, but often it is not specifically investigated. Concerning emotion work, the majority of studies emphasize how the display and the regulation of emotions influence *intra*personal outcomes, such as individual well-being (Giardini and Frese, 2006), job satisfaction (Pugliesi, 1999; Grandey et al., 2005b), and stress (Zapf et al., 2001; Brotheridge and Grandey, 2002; Grandey, 2003; Totterdell and Holman, 2003; Grandey et al., 2005b). There are results that refer to interactional goals (e.g., getting more tips; Rafaeli and Sutton, 1987; see above), but these typically refer to strangers (clients, customers, etc.). In interactions with people that one interacts with on a daily basis, such as colleagues and superiors, these strategies may not be as effective (e.g., because these interaction partners are more skilled in detecting them, or because authenticity may be a strong norm); however, with few exceptions (Tschan et al., 2005), superiors and colleagues as interaction partners have not been in the focus of emotion work research. Furthermore, when dealing with emotion displays that are not in accordance with one's feelings (i.e., surface acting), emotional labor research typically focuses on the suppression of negative emotion and their masking by either neutral or positive emotion display. The up-regulation of positive emotions that one does feel has not received much attention (see Nair, 2008; Cote et al., 2013), nor has the fact that in such a case it may suffice to express the emotion felt, thus showing a weaker expression but avoiding the danger of perceived inauthenticity.

In sum, research on impression management and emotion work provides much general evidence that managing the expression of emotions in interaction is likely to be related to goal attainment, but they are not very specific with regard to expressing emotions (impression management) or they focus on strangers rather than people one interacts with frequently at work, and on the display of positive emotions that are not felt (emotional labor).

EMOTION DISPLAY AND INTERACTION PARTNERS: SUPERIOR VERSUS COLLEAGUES

Strategic emotion expression or the display regulation of emotion strongly depends on the type of interaction partner (Clark et al., 1996). To reach goals, people are likely to selectively focus their emotion regulation behavior toward more important interaction partners, especially those who have power and control over their outcomes in organizations (Kilduff et al., 2010). At the same time, it is also plausible that the *effect* of emotional expression, and particularly the effect of display regulation, on goal attainment depend on the interaction partner. Specifically, we assume that expressing, and amplifying, positive emotions should have a greater impact in interactions with superiors as compared to colleagues. Two aspects of the relationships involved are especially important for our reasoning: familiarity (closeness), and hierarchy (power) (e.g., Zaalberg et al., 2004; Clark and Finkel, 2005; Hall et al., 2007; Glaso and Einarsen, 2008).

First, more frequent, and more informal, interactions between colleagues (as compared to interactions with supervisors) imply higher familiarity (cf. Argyle and Henderson, 1985; Kahn, 2007), which, in turn, implies that one knows the other person comparatively well and may evaluate his or her behavior more in terms of its contribution to the common work goal (e.g., dependability, cooperativeness, supportive behavior, etc.) than in terms of the way the behavior is expressed. In other words, colleagues may be willing to comply with a request even if it is not accompanied by the expression of positive emotions. Such compliance would be in line with the "*rules for coworkers*" investigated by Argyle and Henderson (1985), according to which colleagues are expected to cooperate on common goals independent of the quality of their relationship. The evidence on actual behaviors in the workplace is line with this reasoning. Thus, people perform less emotion work with interaction partners who are closer to themselves as compared to more distant interaction partners (Diefendorff et al., 2010). A recent event-sampling study found that people engage in more effortful impression management with distant than with close others (Gosnell et al., 2011). In closer relationships, other considerations, especially authenticity, seem to gain more weight. Most employes have closer relationships among each other than with their superiors (Argyle and Henderson, 1985). In closer relationships, faking unfelt emotions is generally not well-received; individuals are expected to interact more authentically, openly, and honestly (Clark et al., 1996). People do, indeed, express their emotions more authentically to their coworkers than to their superior

(Diefendorff et al., 2010). Colleagues are more likely than strangers to detect an inauthentic positive emotion display, causing this tactic to "backfire," and potentially ruining one's credibility and one's reputation (Clark et al., 1996). (Such backfiring effects are not confined to colleagues; they have been reported for more distant interaction partners, such as clients (Grandey et al., 2005a). However, as employes usually are in closer contact with their colleagues than with their superiors, the chance of "being caught" is likely to be higher in interactions with colleagues). Therefore, expressing and amplifying positive emotions may be less effective in a relationship that is high in familiarity. In contrast, a superior with whom one has a more distant relationship is less likely to detect (at least subtle) signs of emotion regulation; he or she might rely more strongly on the emotional expression projected by a subordinate when judging the subordinate's emotion (Ashkanasy and Humphrey, 2011b, p. 37); as discussed previously, showing positive emotions toward a superior would be advantageous from this perspective.

Second, being hierarchically lower than the interaction partner, and therefore having less power, implies that one depends on the goodwill of the interaction partner to a much greater extent than when one deals with colleagues of equal standing. Among colleagues, work goals are often imposed on everyone by the organization, and thus, cooperation toward goals in interactions is less discretionary. This lack of discretion is also implied by the fact that colleagues often depend more strongly on each other, which makes reciprocity especially salient and entails greater risks for a tit-for-tat response of a colleague whose interests have been ignored. In contrast, supervisors have more discretion with regard to going along with requests by subordinates or for supporting their specific goals. This power position allows them to be influenced more strongly by momentary signs of cooperativeness and compliance by the subordinate, and to react more strongly to their own mood when making a decision. It also is possible that they are easily flattered, attributing positive emotion display to their convincing and "winning" way of interacting and leading (cf. Pfeffer et al., 1998), thus becoming victims of the "romance of leadership" themselves (Gray and Densten, 2007). Since one of the important aspects of expressing positive emotions is that it may induce a positive mood in others (Hatfield et al., 1994; Zaalberg et al., 2004; Parkinson and Simons, 2009; Niven et al., 2011), these aspects are likely to play a greater role for superiors as compared to colleagues.

Research on actual behavior toward supervisors is in line with our reasoning. For instance, Mann (1999) showed that low status individuals engaged in more display regulation than high status individuals, and research by Méhu (2011) showed that people use more strategic smiles when interacting with people of higher status. In a similar vein, flight attendants expressed more positive emotions toward first and business class passengers than to economy class passengers (Hochschild, 1983). In organizations, employes engaged in less emotion work when dealing with partners of equal or lower status (colleagues) as compared to clients (Tschan et al., 2005) or superiors (Diefendorff et al., 2010). Also, impression management tactics frequently involve *upward* influence tactics (Kipnis and Schmidt, 1988), and employes express positive emotions to foster positive outcomes at work (Wayne and Liden, 1995). Research on impression management shows that people adapt their tactics to the perceived power of the audience (Gardner and Martinko, 1988) and its expectations (Rudman, 1998), and that they use specific impression-management tactics in interactions with superiors (Baumeister, 1989). It seems likely that subordinates are especially vigilant toward their superiors and monitor closely how the superiors react to their behaviors, thus putting special effort into adjusting their behaviors, including their emotion display, to the signals of receptivity sent by the superiors (Kilduff et al., 2010). Furthermore, Staw et al. (1994) found an effect of positive emotions on social support from both colleagues and supervisors; however, this effect was stronger for support by superiors as compared to colleagues. Thus, showing positive emotions seems to be more important, and more effective, when dealing with superiors, as opposed to colleagues, and actual behavior is in accordance with this assumption. Note that we are talking about the likelihood of reacting in a specific way in specific situations; thus, when we say that superiors may let themselves be guided by their mood more than subordinates, we do not imply that they do this consistently. For instance, it seems likely that employes adjust their emotion display to situational characteristics that signal favorability for pursuing their goals (Kilduff et al., 2010).

CURRENT STUDY

The aim of the present research is to investigate if the expression of positive emotions and the enhancement of positive emotions (i.e., amplifying the display of positive emotions felt) facilitate achieving goals during naturally occurring social interactions at work. We examine this issue (a) in general, and (b) with regard to different interaction partners, specifically colleagues and superiors.

We state our hypotheses as follows:

Hypothesis 1. A stronger expression of positive emotions during interactions at work will be related to a higher level of goal attainment.

Given that a positive emotion expression could be due to the actual positive emotion felt, its expression may be based on two processes. First, the intensity of the emotion display may correspond to the intensity of the emotion felt; second, it may be based on display regulation involving its amplification in comparison to the intensity it is felt (cf. Gross, 1998). We emphasized above that it is the expression of positive emotions that is responsible for positive effects in social interactions, not the underlying emotion itself, at least as long as the emotion display is perceived as authentic by the interaction partner, which may often be the case. Amplifying a positive emotion, that is, displaying it with a higher intensity than it is felt, may, therefore, represent a promising strategy for achieving goals. These considerations lead to the following hypothesis:

Hypothesis 2. Employes' *amplification of positive emotions* during a workplace interaction is related to a higher level of goal attainment during the interaction.

Based on the arguments presented above, we also posit that the type of interaction partner (superior versus colleague) moderates the relationship between expressing, as well as amplifying,

positive emotions and the degree of goal attainment in everyday interactions at work. More specifically, we suppose that expressing as well as amplifying positive emotions has a stronger relationship to goal attainment during interactions with superiors than during interactions with colleagues.

Hypothesis 3. The interaction partner moderates the relationship between the expression of positive emotions and goal attainment in the sense that this relationship is stronger for interactions with superiors than for interactions with colleagues.

A similar assumption is formulated for amplifying positive emotions.

Hypothesis 4. The interaction partner moderates the relationship between amplifying positive emotions and goal attainment in the sense that this relationship is stronger for interactions with superiors than for interactions with colleagues.

MATERIALS AND METHODS

PARTICIPANTS

We recruited 113 Swiss employes from different organizations, using a snow ball recruiting system. Of the participants, 61.75% were women, mean age was 34.3 years (SD = 13.8), age ranged from 18 to 66. Level of education ranged from basic training to the completion of a professional or tertiary degree; participants worked in a wide range of occupations across different sectors of employment. Participation was voluntary and not compensated.

STUDY DESIGN AND PROCEDURE

We conducted the study using a variant of the Rochester Interaction Record methodology (Reis and Wheeler, 1991) to sample everyday interactions at work. Participants were first asked to complete a general questionnaire containing demographic questions, a personality scale, and job-related questions. They were then asked to record each interaction they had over a 7-day period, and to answer questions about each interaction. Before the self-observation period, participants met with a research assistant who handed them the general questionnaire and seven daily booklets for recording the interactions. They were instructed on how to use the interaction records. We asked them to answer the questions as soon as possible after every social interaction that lasted 10 min or longer, and on shorter interactions they considered important. They were informed that this study was about investigating emotions in daily life during social interactions at work and in private life. The research assistant explained what we meant by an interaction (an encounter with one or more other people during which they mutually adjusted their behavior); and what was not considered an interaction (e.g., waiting for a bus with other people). Together with the research assistants, participants filled out sample interaction records to familiarize themselves with the methodology. Participants filled in the general questionnaire the same day and started the 7-day interaction record period the next day. They reported interactions for each day in separate daily booklets and mailed the booklets back to the researchers. The study was conducted in French; all non-French-language instruments were translated into French and controlled by back-translation.

MEASURES

General questionnaire (measures on the person-level)

We recorded participants' demographics such as sex, age, level of education, occupation, and the nature of their jobs. We measured neuroticism and extraversion by administrating the Big Five Personality Test (Costa and McCrae, 1995), in a short version developed by Schallberger and Venetz (1999). Cronbach's alpha for neuroticism and extraversion was 0.77 and 0.74, respectively.

Daily interaction records (measures on the interaction-level)

For each interaction, participants indicated whether it took place at work or outside of work. Only interactions at work were considered for this study. For each interaction, participants answered several questions, including whether they pursued a goal during the interaction. Only interactions for which goal pursuit was reported were included in the study.

Interaction partners. Participants provided information about the type of interaction partners for each interaction (colleague, superior, client, other). As the focus of this study is on interactions with superiors and colleagues, we excluded interactions involving only clients or other interaction partners. We created a dummy variable representing the presence of the superior in the interaction (0 = only colleagues are present; 1 = superior is present).

Emotions experienced and emotions shown during the interactions. For each interaction, participants were asked to report the emotion(s) felt and the emotion(s) shown during the interactions, using a variant of the Geneva Emotion Wheel (Scherer, 2005). The Geneva Emotion Wheel is a graphical tool that allows participants to record discrete positive emotions (e.g., interest, joy, pride etc.) and discrete negative emotions (e.g., anger, disappointment, shame etc.) as well as the *intensity* of each emotion on a scale from 1 to 4 on circles with increasing size, with an option to indicate "none" in the middle of the wheel. If an emotion was not ticked, it was coded as 0 (not felt or not shown, respectively). The Geneva Emotion Wheel is an accessible, easy to use tool that has been successfully used under time pressure and for repeated assessments (Tran, 2004; Hunziker et al., 2011; Scherer et al., in press). Two sets of the Geneva Emotion Wheel were used for each interaction, referring (1) to emotions experienced and (2) to emotions shown. *Emotions experienced* were measured on the first emotion wheel by asking "*In this interaction, which emotion(s) did you feel? Indicate all emotions felt as well as their intensity on the emotion wheel.*" *Emotions shown* were measured on the second emotion wheel by asking "*In this interaction, which emotion(s) did you show? Indicate all emotions you showed as well as their intensity on the emotion wheel.*" We computed scores for positive emotions by calculating the mean intensity of the emotions interest, happiness, joy, pleasure, tenderness, enthusiasm, relief, and compassion for emotions felt as well as for emotions shown. We computed scores for negative emotions shown and felt as the mean intensity of anger, contempt, disgust, disappointment, anxiety, sadness, embarrassment, shame, and guilt in an analogous way.

Degree of goal attainment during the interaction. To measure the degree of goal attainment in the interaction, participant

answered the question "*Have you attained your objective(s) in this interaction?*" on a five point Likert scale from 1 (not at all) to 5 (absolutely).

ANALYSES

As interactions are nested within individuals, we analyzed the data by way of multilevel regression analysis (Nezlek, 2003; Hox, 2010) using SPSS (Heck et al., 2010). Interactions are represented on level 1 (interaction-level), and individual participants are represented on level 2 (person-level).

For Hypotheses 1 and 3, which refer to the expression of positive emotions, we used multilevel regression analysis. For testing Hypotheses 2 and 4, which refer to the enhancement of positive emotion (i.e., the discrepancy between positive emotion felt and positive emotion shown), we ran polynomial procedures as suggested by Shanock et al. (2010). Following Hu and Liden (2012) and Vidyarthi et al. (2010), who ran polynomial analyses within a multilevel structure, we included the higher level terms of positive emotion felt and positive emotion shown; however, if the test of the curvature of the estimated response surface, which consists of the higher level terms (i.e., $\text{Felt}^2 - \text{Felt} \times \text{Shown} + \text{Shown}^2$), was not significant, we proceeded with the linear terms only and computed the discrepancies of positive emotion by subtracting the regression coefficient of positive shown from the regression coefficient for positive felt (see Vidyarthi et al., 2010; Hu and Liden, 2012). Finally, we tested the slope of incongruence by surface response tests (Shanock et al., 2010).

For all of our analyses, we included control variables that have been found to covariate with emotional constructs in social contexts. We controlled for age, as it has been shown that a shift in emotion regulation strategies is associated with developmental changes in adulthood (John and Gross, 2004). We controlled for gender, as there are gender differences in participation in social interactions (Wheeler and Nezlek, 1977) and in emotional suppression (Gross and John, 2003). We controlled for extraversion and neuroticism as these personality traits have been found to influence individual's susceptibility for experiencing emotions (Watson et al., 1988; Brotheridge and Grandey, 2002; Diefendorff and Richard, 2003; Diefendorff et al., 2011). Neuroticism and extraversion are related to higher emotional expressivity (Gross and John, 1994), and extraversion is related to display regulation (Diefendorff et al., 2005; Judge et al., 2009). At the interaction-level, we controlled for positive and negative emotion experienced or emotion shown whenever appropriate.

In terms of centering, for all person-level variables where zero was not a meaningful number, we used grand mean centering (GMC). For all continuous interaction-level variables, we chose a centering method that corresponded with our method of analysis. In multilevel analysis (Hypotheses 1 and 3) we used group mean centering (CWC), as suggested for this type of research (Enders and Tofighi, 2007; Hox, 2010; Ohly et al., 2010). For polynomial regression (Hypotheses 2 and 4), we used GMC (Edwards and Parry, 1993).

RESULTS

DESCRIPTIVE STATISTICS

Participants reported a total of 1535 interactions at work, corresponding to a mean of 13.58 interactions per participant. Of those interactions, 930 were with superiors and/or with colleagues. Participants reported pursuing a goal in 72.9% of the interactions with the superior present, and in 47.3% of the interactions with colleagues present. In total, 494 interactions were included in the analyses, which all involved interactions with superiors and/or colleagues as well as goal pursuit. Mean goal attainment per interaction was 3.93 (SD = 1.19).

Table 1 shows the means, standard deviations, and intercorrelations of all person-level variables; **Table 2** shows the means, standard deviations, and intercorrelations of the interaction-level variables.

POSITIVE EMOTIONS EXPRESSED AND GOAL ATTAINMENT

The initial analysis of an unconditional null model without any predictors confirmed that it was appropriate to use multilevel analysis. The intercept varied significantly across individuals (Wald $Z = 2.958$, $p < 0.001$), and the intraclass correlation (ICC) of 0.17 suggested that a large amount of the variability in the degree of goal attainment resided within individuals (Heck et al., 2010).

Hypothesis 1 states that positive emotions expressed during the interaction (whether from genuine emotions felt or from amplification) are related to goal attainment; Hypothesis 3 states that this relationship is moderated by interaction partner in that the relationship between positive emotions expressed and goal attainment is stronger in interactions with superiors than in interactions with colleagues.

Results are displayed in **Table 3**. To test Hypotheses 1 and 3, we first estimated a two-level unconditional null model. Model 1 in **Table 3** shows the results for Hypothesis 1. Besides our predictor variable positive emotions expressed we included the control variables age, gender, extraversion, and neuroticism on the person-level, and negative emotions expressed on the interaction-level. Expression of positive emotions during the interaction was significantly related to the degree of goal attainment ($B = 0.80$, SE = 0.13, $p < 0.01$), supporting Hypothesis 1. Note that the expression of negative emotions also showed a (negative) relationship to goal attainment ($B = -0.54$, SE = 0.23; $p < 0.05$). Of the control variables, only neuroticism was marginally related to goal attainment.

Hypothesis 3 postulated a moderating effect of the interaction partner. It was tested by adding the interaction partner variable (superior present versus only colleague(s) present), and subsequently the interaction term of positive expression times

Table 1 | Means, standard deviations, and correlations between level 2 variables.

	Range	*M*	SD	1	2	3
Gender	Female = 0, Male = 1	0.38	0.49	1		
Age	18–66	35.26	14.28	−0.11	1	
Extraversion	1–6	4.19	0.83	−0.02	−0.21*	1
Neuroticism	1–6	2.80	0.80	−0.22*	0.12	−0.23*

N = 112 employes.

*†p < 0.10, *p < 0.05, **p < 0.01 (two-tailed).*

Table 2 | Means, standard deviations, and correlations between level 1 variables.

	Range	*M*	SD	1	2	3	4	5	6
Positive emotion felt	0–4	0.78	0.65	1					
Positive emotion expressed	0–4	0.75	0.58	0.84**	1				
Negative emotion felt	0–4	0.24	0.37	−0.13**	−0.13**	1			
Negative emotion expressed	0–4	0.11	0.29	−0.17**	−0.19**	0.72**	1		
Amplification of positive emotion	0–4	0.13	0.24	−0.04	0.40**	0.08	−0.11*	1	
Superior present (yes = 1; no = 0)	0, 1	0.34	0.47	−0.11*	−0.08†	0.04	0.05	−0.04	1
Degree of goal attainment	1–5	3.9	1.2	0.32**	0.29**	−0.41**	−0.30**	0.04	−0.02

n = 494 interactions at work with goal pursuit with superiors and/or with colleagues.

*$^{\dagger}p < 0.10$, *$p < 0.05$, **$p < 0.01$ (two-tailed).*

interaction partner to the previous model. The interaction term was significant ($B = 0.72$; SE = 0.28, $p < 0.01$).

To illustrate the direction of the effect, we present the result in **Figure 1** as an interaction plot (Dawson and Richter, 2006), containing separate regression lines for interactions with colleagues and for interactions with superiors. **Figure 1** indicates that expressing positive emotions was more strongly related to goal attainment in interactions with superiors, as compared to interactions with colleagues. A single slope test (Preacher et al., 2006) showed that the slope for interactions with superiors was significantly different from zero ($t = 2.57$, $p = 0.01$), whereas the slope for interactions with colleagues was not ($t = 1.23$, $p = 0.23$). These results support Hypothesis 3.

AMPLIFYING THE EXPRESSION OF POSITIVE EMOTIONS AND GOAL ATTAINMENT

In Hypothesis 2 we state that the amplification of positive emotions felt (i.e., showing positive emotions more strongly than they are felt) is related to higher goal attainment in work-related interactions; Hypothesis 4 states that this relationship is more pronounced in interactions with superiors than in interactions with colleagues.

Results are presented in **Table 4**. Again, age, gender, extraversion, and neuroticism were included as control variables on the person-level. In these analyses, we entered both positive felt and positive shown emotions, which allows for assessing the effect of congruence between positive felt and shown (i.e., authentic positive emotion expression), and the effect of incongruence between positive felt and shown (i.e., the enhancement of positive, and the suppression of positive emotion). In the analyses of emotion display (**Table 3**), expressing negative emotions was significantly associated with lower goal attainment. For the analysis of amplification effects (**Table 4**), we also controlled for negative emotions, both felt and shown. Indeed, negative emotions felt were significantly associated with low goal attainment, both overall and in the analyses involving superiors or colleagues, respectively. Following Hu and Liden (2012), the higher level terms for positive emotion (i.e., $\text{Felt}^2 - \text{Felt} \times \text{Shown} + \text{Shown}^2$) were not included in the final model, as they were insignificant in all analyses, indicating the absence of non-linear relationships (see the section on analyses).

Hypothesis 2 postulated an effect of amplifying positive emotions regardless of the interaction partner. The response surface slope test for the line of congruence ($x = y$) was highly significant ($B = 0.51$, SE = 0.09, $p = 0.001$), suggesting that there is a positive linear relationship between authentic positive expression and degree of goal attainment. However, the response surface slope test for the line of incongruence ($x = -y$) was not significant, suggesting that neither enhancement nor suppression of positive emotion influenced degree of goal attainment. Amplification of positive emotions therefore does not seem to enhance goal attainment in general; Hypothesis 2 is thus not supported. These results are displayed in **Figure 2**.

Hypothesis 4 postulated that the effect of amplifying positive emotions would be stronger for superiors as compared to colleagues as interaction partners. To assess differences between interaction partners, we ran separate analyses for interactions with superior present, and for interactions with colleague(s) present. Results support Hypothesis 4 (**Table 4**, Model 4). For encounters with a superior (displayed in **Figure 3**), the response surface slope test for the line of congruence ($x = y$) was highly significant. ($B = 0.81$, SE = 0.16, $p = 0.001$) suggesting that there is a positive linear relationship between authentic positive expression and degree of goal attainment. Most importantly, the response surface slope test for the line of incongruence ($x = -y$) was significant. ($B = -1.05$, SE = 0.53, $p = 0.047$ two-tailed). The negative sign of the coefficients implies the effect on goal attainment is driven by showing more positive emotions than felt; thus it is the enhancement of positive shown, not the suppression of positive emotion that is important for achieving goals. For encounters with colleagues (displayed in **Figure 4**), the response surface slope test for the line of congruence ($x = y$) was highly significant. ($B = 0.39$, SE = 0.10, $p = 0.001$) suggesting that there is a positive linear relationship between authentic positive expression and degree of goal attainment. The response surface slope test for the line of incongruence ($x = -y$) was not significant, suggesting that neither enhancement nor suppression of positive emotions influence degree of goal attainment. These results support Hypothesis 4.

ALTERNATIVE ANALYSIS

With regard to Hypotheses 2 and 4, we considered several ways of conducting these analyses besides multilevel polynomial analysis. One involves an interaction between emotion felt and emotion shown, and the other involves the creation of an emotion enhancement score (i.e., a difference score). All these analyses led essentially

Table 3 | Predicting goal attainment in workplace interactions by expressing positive emotions (Hypothesis 1 and Hypothesis 3).

Variables	Unconditional Estimate (SE)	Model 1 (Hypothesis 1) Estimate (SE)	Model 2 (Hypothesis 3) Estimate (SE)
Intercept	3.91 (0.07)**	3.97 (0.10)**	3.99 (0.10)**
LEVEL 2 (GRAND MEAN CENTERED)			
Gender (female = 0, male = 1)		−0.12 (0.15)	−0.13 (0.15)
Age		0.00 (0.01)	0.00 (0.01)
Extraversion		0.01 (0.09)	0.03 (0.09)
Neuroticism		−0.18 (0.09)†	−0.18 (0.09)†
LEVEL 1 (GROUP MEAN CENTERED)			
Positive emotions expressed		**0.80 (0.13)****	**0.59 (0.15)****
Negative emotions expressed		−0.54 (0.23)*	−0.50 (0.23)*
Superior present (yes = 1; no = 0)			−0.02 (0.11)
Interaction term:			
Positive shown × superior present			**0.72 (0.28)****

N = 113 employes, n = 494 interactions at work involving goal pursuit with superiors and/or with colleagues.

*†p < 0.10, *p < 0.05, **p < 0.01. Tests are all two-tailed.*

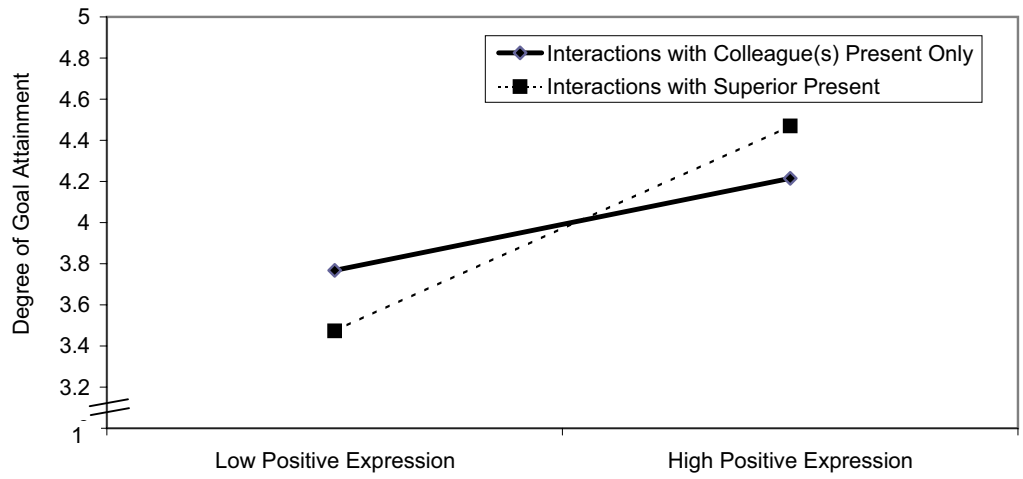

FIGURE 1 | Predicting goal attainment by *expressing* positive emotions during interactions at work with a superior present versus not present.

to the same results; the interaction plot (Dawson and Richter, 2006) for enhancing positive expression is similar to **Figure 1**; the slope test (Preacher et al., 2006) showed that more amplification of positive emotions was related to higher levels of goal attainment only in interactions with superiors ($t = 2.48$, $p = 0.01$), but not in interactions with colleagues ($t = 0.28$, $p = 0.78$).

DISCUSSION

We investigated the effects of expressing and amplifying the expression of positive emotions in interactions with colleagues and/or superiors at work on goal attainment. In more than half (53.1%) of the interactions participants reported having pursued a goal; this underscores the importance of goals in interactions at work. Although the degree of goal attainment was relatively high (AM = 3.9 on a scale from one to five), we did find relationships between emotions expressed and goal attainment and between display regulation and goal attainment. We were interested in whether expressing and amplifying *positive* emotions is related to the degree of goal attainment in social interactions at work. The results, based on 494 interactions at work provided by 113 employes, suggest that (1) the *expression* of positive emotions is related to higher goal attainment, but (2) this main effect is qualified by an interaction indicating that this effect only holds for interactions with superiors, not for interactions with

colleagues. The results furthermore (3) suggest that *amplifying positive emotions* in interactions is significantly related to goal attainment in interactions with superiors, but not in interactions with colleagues.

We discuss (1) the expression of positive emotions and the role of authenticity in general, and (2) the differential findings for interactions with coworkers and superiors.

(1) Our result of a significant main effect of expressing positive emotions is in accordance with previous research that tested similar effects in a more indirect way or by experimental research. For example, negotiation research has shown that people in a positive mood are more likely to adopt optimistic, cooperative strategies, and seek integrative solutions (e.g., Carnevale and Isen, 1986; Forgas, 1998), and less likely to engage in aggressive tactics (e.g., Baron, 1984), thus contributing to better joint outcomes (Potworowski and Kopelman, 2008). Our findings are also in accordance with the literature on social functions of emotions (Clark et al., 1996; Van Kleef, 2010), which suggests that expressing positive emotions may be perceived by the interaction partner as signaling cooperation, which could be functional for goal attainment.

Note that effects of expressing positive emotions cannot be attributed to an absence of negative emotions, as expressing negative emotions were controlled for in our analyses. Not unexpectedly (although not hypothesized, as it was not the focus of this paper), we found a negative effect of expressing negative emotions on goal achievement. Again, this is in accordance with previous studies. For example, Friedman et al. (2004) showed that in real electronic mediations, expressing anger reduced settlement quality. Our finding that expressing negative emotions is negatively related to reaching goals thus replicates these earlier findings. Note that expressing anger has been found to predict better outcomes for the person expressing anger in some specific circumstances, such as short term negotiations among strangers (Van Kleef et al., 2004).

However, our study extends previous research by showing that expressing positive emotions is not conducive for goal attainment unconditionally. Specifically, the effect for expressing positive emotions was moderated by the type of interaction partner: expressing positive emotions increased goal attainment only during interactions with superiors as when compared to during interactions with colleagues; we will comment on that result below.

The polynomial regression analysis offers additional insights. The results of this analysis suggests that expressing positive emotions *authentically* is beneficial regardless of the interaction partner, as the slope for the line of congruence is significant in all three analyses.

It is not surprising that expressing positive emotions authentically has positive effects regardless of the interaction partner. Authentic expression of positive emotions has all the advantages associated with expressing positive emotions that have been postulated, and found, in research on emotional contagion (e.g., Barsade, 2002) and on emotional labor (regarding deep acting and genuine emotional displays; Ashkanasy and Humphrey, 2011a), but it does not contain the risk of "leaking" associated with faking (Grandey et al., 2005a; Liu and Perrewe, 2006).

That the effect of authentic display of positive emotions is not likely to be disputed actually provides the basis for our focus on the way people express positive emotions they actually feel. Most notably, since an authentic expression of these emotions promises positive effects without risks, can one expect any additional effect of amplifying these positive emotions? Amplifying positive emotions might not only yield little additional value, as

Table 4 | Predicting goal attainment in workplace interactions from positive felt and shown (Hypothesis 2 and Hypothesis 4).

Variables	All partners (Hypothesis 2) Estimate(SE)	Superior (Hypothesis 4) Estimate(SE)	Coworker (Hypothesis 4) Estimate(SE)
Intercept	4.15 (0.08)**	4.32 (0.13)**	4.14 (0.09)**
LEVEL 2 (GRAND MEAN CENTERED)			
Gender (female = 0, male = 1)	−0.11 (0.12)	−0.48 (0.18)*	−0.07 (0.13)
Age	0.00 (0.00)	−0.02 (0.01)*	0.00 (0.00)
Extraversion	0.02 (0.07)	−0.11 (11)	0.04 (0.08)
Neuroticism	−0.06 (0.08)	−0.11 (0.12)	−0.05 (0.08)
LEVEL 1 (GRAND MEAN CENTERED)			
Positive felt	0.37 (0.14)*	−0.12 (0.26)	0.44 (0.15)**
Positive shown	0.17 (0.15)	0.93 (0.29)**	−0.05 (0.17)
Congruence between positive felt and shown	**0.51 (0.09)****	**0.81 (0.16)****	**0.39 (0.10)****
Discrepancy between positive felt and shown	**0.16 (0.28)**	**−1.05 (0.53)***	**0.50 (0.31)**
Control variables			
Negative felt	−1.31 (0.18)**	−1.24 (0.26)**	−1.38 (0.22)**
Negative shown	0.43 (0.25)†	0.35 (0.34)	0.66 (0.35)†

N = 113 employes, n = 494 interactions at work involving goal pursuit with superiors and/or with colleagues.

*†p < 0.10, *p < 0.05, **p < 0.01. Tests are all two-tailed.*

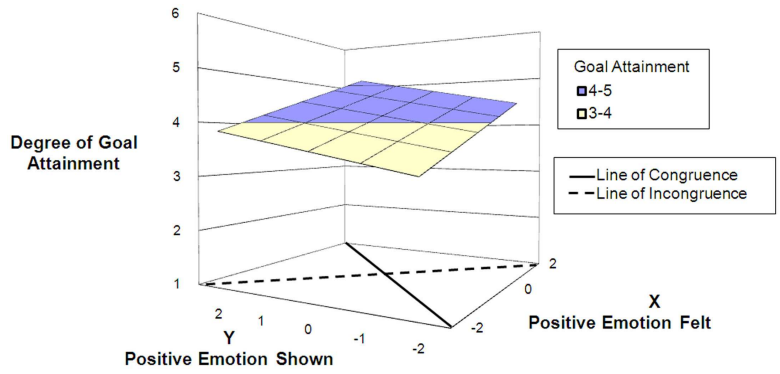

FIGURE 2 | Predicting goal attainment by positive emotions felt and shown during interactions at work.

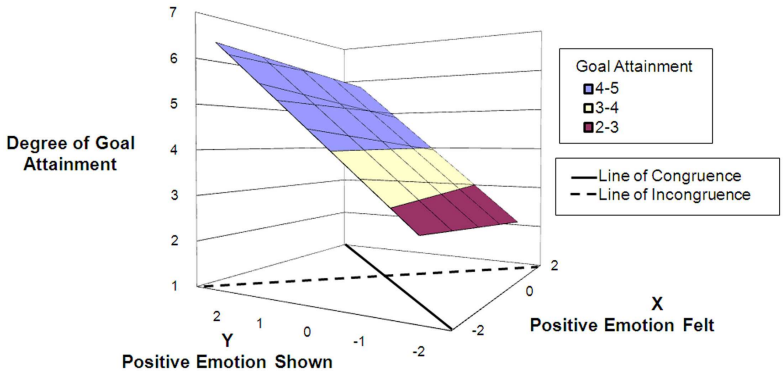

FIGURE 3 | Predicting goal attainment by positive emotions felt and shown during interactions with *superiors*.

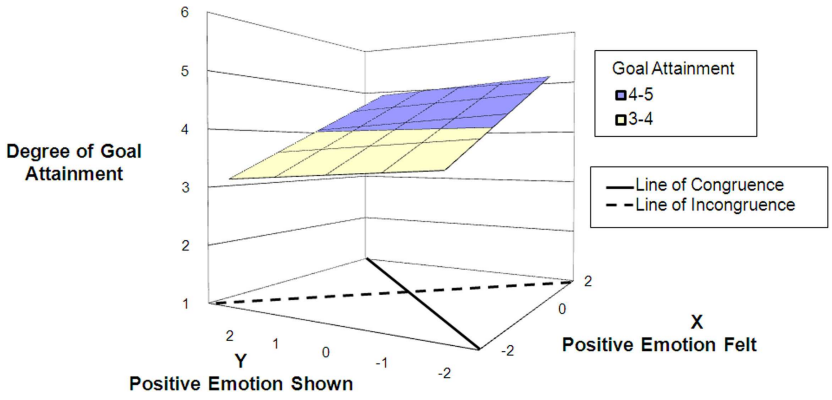

FIGURE 4 | Predicting goal attainment by positive emotions felt and shown during interactions with *coworkers*.

the underlying emotion felt already is positive; it might actually backfire if it is detected as non-authentic. Thus, there is an important contrast to the issue of negative emotion display. Expressing negative emotions may have such damaging effects that the risk of being detected may seem worth taking in many situations. For positive emotions, the benefits of amplifying them are not so obvious. Showing that amplifying positive emotions may support goal attainment therefore adds to the literature.

We postulated a main effect of amplifying positive emotions on goal attainment in everyday social interactions at work. To formulate our hypotheses we drew, among others, on the impression management literature (Giacalone and Rosenfeld, 1989). Impression management tactics that include expressing and amplifying positive emotions have been found to have the most consistent effects on long-term organizational outcomes (Higgins et al., 2003; Harris et al., 2007). While we did not find an effect for the amplified expression of positive emotions for colleagues as interaction partners, we did find it for supervisors; it is that effect that we turn to now.

(2) We hypothesized that the influence of expressing or amplifying positive emotions on goal attainment is more pronounced in interactions with superiors than in interactions with colleagues, based on considerations concerning power (Mast and Hall, 2004), relationship closeness (Clark and Finkel, 2005), and rules of cooperation at work (Henderson and Argyle, 1986). Multilevel moderated regression analyses supported these contentions, and slope tests revealed that an effect of expressing positive emotions was only found in interactions with superiors, but not in interactions involving colleagues only, as hypothesized. Furthermore, in the polynomial regression analysis, amplifying positive emotions increased goal attainment only in interactions with superiors, but not in interactions with colleagues. These findings are in accordance with research showing that people adapt their tactics to the perceived power of the audience (Gardner and Martinko, 1988) and specifically to situations that involve interacting with superiors (Baumeister, 1989). We argued that this tendency to engage in more emotion regulation vis-a-vis superiors is not only more frequent but also especially effective (cf. the study by Staw et al. (1994), who did not, however, distinguish between emotions felt and shown, and did not refer to daily interactions).

Bound by work rules and norms (Argyle and Henderson, 1985), colleagues typically are dependent on the focal person to a much greater degree than supervisors, which implies that they have less discretion concerning whether or not they will comply with the focal person's goals; they therefore should be less strongly influenced by the expression of positive emotions than supervisors. Also, for colleagues, the focal person's behavior is embedded in a much wider and richer context, such as their more intimate knowledge about the dependability, cooperativeness, and contributions of the focal person in general; such a rich context-knowledge should render specific behavioral instances less important for colleagues, as compared to superiors, who often do not have such a rich contextual background knowledge. Furthermore, the chances that faking emotions may backfire should be greater when interacting with colleagues, as they are more likely to detect an inauthentic positive emotion expressed.

In contrast to colleagues, superiors often know the employe less well and therefore may be less likely to detect subtle signs of inauthenticity. Unless there is a specific reason to be very attentive (e.g., when they depend on the cooperation of a specific employe in a given situation; cf. Kilduff et al., 2010), they may not search for pertinent information deeply enough, being satisfied with external signs of positivity. Such a lack of vigilance may be supported by the fact that deliberate smiles are more common in people who are low in status (Méhu, 2011); superiors therefore may simply be used to that kind of behavior and assume it to be normal. One might even speculate that some supervisors may notice the inauthenticity but not be bothered by it; rather, they may interpret such behavior as appropriate for subordinates to display toward their superiors, as they indicate the awareness, and acceptance, of the power differential by the less powerful partner (cf. Méhu and Dunbar, 2008).

All in all, in terms of achieving one's goals, it seems to pay off to express positive emotions when interacting with superiors, and to even amplify positive emotions that are not strongly felt. There is a certain irony in these findings: Employes tend to *show more* positive emotions when superiors are present, as indicated by the positive correlation between the presence of a superior and the expression of positive emotions in **Table 2**. However, they *experience fewer* positive emotions when interacting with superiors as compared to colleagues, as indicated by the negative correlation between the presence of a superior and the experience of positive emotions (see **Table 2**, and cf. the finding by Tschan et al. (2010) that people experience less pleasure when superiors are present). Emotional labor toward superiors, which so far has been overshadowed by the dominant focus on clients (for an exception, see Tschan et al., 2005), deserves much more attention, as does the question of by which mechanisms employes manage to induce their superiors to comply with their objectives by showing positive emotions.

LIMITATIONS AND STRENGTH

This study has several limitations. First, all data are based on self-report, which bears the risk of common method bias. There are still limited alternatives to self-report when assessing emotions (De Gelder, 2010), particularly in everyday situations. As self-report bias has been found to be influenced by positive and negative trait affectivity (Podsakoff et al., 2003), we controlled for trait extraversion and trait neuroticism in this research, thus alleviating the common method problem. Note also that we asked questions about feeling and showing emotions and goal attainment in interactions repeatedly; our results could therefore be attributed to common method bias only to the extent that this bias is differentially associated with specific interactions. Also, emotions (felt and shown) and goal attainment are assessed by different types of scales, which also might alleviate the common method problem (Ashkanasy et al., 2006). Finally, common method bias makes it, if anything, more difficult to detect statistical interactions. Note also that a number of authors recently have concluded that the common method problem may have been overstated (e.g., Spector, 2006). Common methods bias may have influenced our results, but it is unlikely that this bias would render the results spurious.

Second, the most important limitation of the study is that we cannot reliably establish cause-effect relations. Information about the interactions, the interaction partners, emotions expressed and the amplification of positive emotions were all measured immediately after the interaction. It is plausible that part of the emotional aspects reported is a result of the degree of goal attainment rather than a predictor of goal attainment. This concern would not be alleviated much by a temporal separation of the measures, as in real life interactions it may become clear already during the interaction whether a goal can be reached or not, and emotional

experiences may thus be influenced by this. This concern is particularly important for the interpretation of our results regarding emotions expressed (Hypotheses 1 and 3), because they correlate highly with the emotions felt. However, we feel that the argument applies less for amplification of positive emotions; they were measured as the discrepancy between positive emotions expressed and positive emotions felt, and, in addition, positive emotions felt were controlled for in our polynomial regression analyses. Whereas failure or successful goal attainment are affective events and influence emotions *felt* (Weiss and Cropanzano, 1996), it is theoretically less plausible that a higher degree of goal attainment should cause more *exaggerating* of positive emotions. However, the issue cannot be resolved in this study.

Third, with 113 participants and about 500 analyzed interactions the sample size is relatively small; furthermore, it is geographically constrained to the French speaking region of Switzerland. Some studies found cross-cultural differences in emotion regulation and its effects (e.g., Grandey et al., 2005b; Fischbach et al., 2006), and this has to be considered. In addition, France and the French part of Switzerland are known to show particularly high scores in power distance, a measure that indicates a particularly low relationship closeness between employes and superiors (Hofstede, 1993), thus, results for other cultures might well differ.

Fourth, when using event-sampling methodology, there are always constraints in the number of questions that can be asked without losing compliance (Nezlek, 1990). We therefore could only ask people if they had a goal but could not ask more specifically about the nature of these goals. The brief descriptions participants gave concerning the interaction sometimes contain hints about possible goals, indicating a wide variety of topics, as one would expect in a work setting (e.g., "I asked my boss if I could leave early"; "Help a client solve a problem"; "No computer in my office"; "Pay raise"). However, these comments were not always informative, and where goals were described we do not know specifics about them (e.g., how large a pay rise the participant expected), nor do we know to which extent the goals were focused on solving a problem (e.g., achieve a solution concerning division of labor) or on one's personal standing (e.g., not being made responsible for a problem).

Lastly, given the constraint in the length of the study, we did not control for emotional intelligence, and therefore could not investigate how emotional intelligence might influence the link between amplifying and goal attainment. We did control for extraversion and neuroticism, which are strong correlates of trait emotional intelligence (Van der Zee et al., 2002; Petrides et al., 2010). Nevertheless, future studies should include the emotional intelligence measures, especially the dimensions of perceiving and managing emotions (cf. Salovey and Grewal, 2005).

This study also has strengths. First, we investigated effects of emotion expression and display regulation in everyday interactions, and thus can show differences and similarities to experimental research. Second, we particularly focused on the expression and amplification of positive emotions in interactions; most research related to display regulation at work has been done in the context of emotion work with an emphasis on regulating the expression of felt *negative* emotions; this also applies to research that focuses on social interactions (Friedman et al., 2004; Van Kleef and Cote, 2007). Showing that there may be circumstances in which amplifying positive emotions benefits goal attainment therefore constitutes a unique contribution, since simply showing the positive emotion authentically already would likely be associated with considerable benefits but less risk.

Although a vast literature on impression management indicated that a general tendency to amplify positive emotions can lead to general positive outcomes at work, our study contributes to showing where exactly this tactic is used and with what effect; in this sense, it contributes to the impression management literature. Furthermore, our findings also demonstrate how important it is to consider *who* is in the interaction, underscoring the role and the status of interaction partners at work.

IMPLICATIONS FOR FURTHER RESEARCH

There are several implications of our results for further research. One issue relates to the type of goals people pursue. As indicated by the short descriptions people gave about the interactions, they do pursue all kinds of task-related goals in interactions. Which type of goals is most frequently pursued by means of expressing positive emotions, however, requires further research that specifies the goals involved. One interesting distinction in this context relates to goals that are related to one's work (e.g., getting a new computer) versus goals that are related to the person him- or her-self, e.g., appearing competent, dependable, etc., but also avoiding negative outcomes such as being blamed for mistake (cf. Cropanzano et al., 1993). Such goals are implied by the research on impression management, but they should be assessed in greater detail in daily interactions. Note that this type of goal may well be pursued in parallel with task- and job-related goals. Also, it is important to investigate the relative importance of the goals involved. From our research one might conclude that it is relatively easy for employes to "manipulate" their superiors. However, it is conceivable that the goals attained by our participants were not very far-reaching, but rather small-scale, everyday goals without substantial implications for the long-term strategy of the superiors. How far the influence of expressing positive emotions goes in terms of more "strategic" goals is an issue that should be investigated.

FINAL REMARKS

Together, our findings contribute to the existing literature on display regulation of emotions in interactions at work by showing that expressing positive emotions may not only benefit the organization to the detriment of the employe (Hochschild, 1983); rather, display regulation may also help to achieve individual goals, and thus create success experiences, which then benefit the individual (Gross et al., 2011). Whereas authentic display of positive emotions seems to be beneficial for goal attainment throughout, amplifying positive emotions evidently works specifically when interacting with superiors.

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Chapter 6

Study 3, Manuscript

Wong, E., Tschan, F., & Semmer, N. K. (In Peer Review, Submitted Revision). Effort in emotion work and well-being: the role of goal attainment.

Abstract

It is well established that regulating one's emotion display in social settings entails psychological costs such as lower well-being. However, regulating emotion display may also help achieving goals during social interactions, and reaching goals is known to enhance well-being. We investigated whether successful goal attainment during social interactions would reduce the negative impact of emotion regulatory effort on well-being. In an experience sampling study, 115 Swiss employees reported their workplace and private social encounters in their daily life for a seven-day observation period. For each of these social interactions, participants were asked to report their effort in regulating their emotions, their level of goal attainment, and their momentary well-being after the interaction. Controlling for gender, age, extraversion, and neuroticism on the person level, for the context of the interaction (private vs. work), and for felt emotions during the social encounter on the situation level, multilevel regression analysis of 1674 social interactions containing a goal supported our hypotheses. (1) Regulatory effort predicted lower well-being after social interactions; (2) degree of goal attainment predicted better well-being after social interactions; (3) degree of goal attainment attenuated the negative effect of regulatory effort on well-being. Attaining goals may, at least partially, compensate for the effort invested; this aspect should be incorporated in further research and theory on emotion work.

Keywords: emotional labor, emotion work, regulatory effort, well-being, goal attainment

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Introduction

People regulate their emotion display when dealing with others, as social demands prescribe how people should behave and express their emotions appropriately in a variety of situational contexts (Hochschild, 1983). In occupational settings, there often are quite explicit rules about emotional display, especially with regard to interactions with customers (Grandey, Diefendorff, & Rupp, 2013). If people feel an emotion that is different from what they should, or want, to display, they can regulate either the emotion felt (deep acting), or the emotion displayed (surface acting; Hochschild, 1983). However, emotion regulation via surface acting (SA) comes with a price; it is well established that SA is associated with lower well-being (Grandey et al., 2013; Hülsheger & Schewe, 2011; Kenworthy, Fay, Frame, & Petree, 2014). A major reason for this association between SA and well-being can be seen in the fact that SA requires regulatory effort (Gross, 2002; Gross & John, 2003; Hülsheger & Schewe, 2011; Kenworthy et al., 2014; Zapf, 2002). As Gross (2002, p. 286) notes, surface acting "requires continuous monitoring and self-correction throughout an emotional event"; by contrast, deep acting requires an initial effort but no continuous regulatory effort. However, managing the display of emotions could also have advantages (Fischer & Manstead, 2008). The ability to manage emotion-expressive behavior is associated with numerous benefits, such as higher income, well-being and status (Cote, Gyurak, & Levenson, 2010). During day to day social encounters, managing the expression of emotions often is helpful for influencing others (Cote & Hideg, 2011; Niven, Totterdell, Stride, & Holman, 2011) and for achieving goals in social interactions (Ashkanasy, 2003; Campos, Frankel, & Camras, 2004; Diefendorff & Gosserand, 2003; Fitzsimons & Bargh, 2003; Grandey, 2000). Successful regulation of emotion expression facilitates smooth social encounters, for instance by ensuring that a coffee break with coworkers is enjoyable, or by fostering a harmonious family reunion. In addition, emotion regulation can help individuals achieve more specific

objectives, such as getting a raise, or effectively discussing sensitive issues with colleagues or friends.

Reaching goals has been regarded as a central purpose of emotion regulation by many emotion researchers (e.g. Campos, Frankel, & Camras, 2004; Thompson, 1994). Goals guide how people act and behave (Bandura, 1986, 1989), and moving towards goals, or achieving goals, is associated with positive affect (Carver & Scheier, 1990; Emmons, 1996; Plemmons & Weiss, 2013). From this perspective, it seems likely that reaching goals in social interactions might, at least partially, offset the negative effects of the effort invested in emotion regulation. However, this issue has not received much attention in the literature.

Note that the goals we are referring to go beyond "emotion goals" (Beal & Trougakos, 2013; Mauss & Tamir, 2014). Emotion goals refer to the successful regulation itself, that is, an emotion goal is attained if one manages to regulate the emotion, or its expression, as intended. By contrast, we are focusing on goals that one wants to achieve by successful regulation.

To address this issue, the current research aims at investigating a) whether emotion regulatory effort is associated with lower well-being after social interactions, as shown in previous research; b) whether goal attainment positively predicts well-being after the interaction; and c) whether goal attainment moderates (buffers) the detrimental effect of regulatory effort on well-being after social interactions. Our research contributes especially by investigating the third issue of an interaction between regulatory effort and goal attainment, as it helps clarify the question under which circumstances negative effects of emotion work might be offset by its functional value.

Regulatory Effort and Well-Being

The view that emotion management could impede personal well-being was derived from the emotional labor concept originally proposed by Hochschild (1979; 1983), who

argued that employees have to display (or hide) certain emotions in exchange for wages (Pugliesi, 1999, p. 126). Research in Hochschild's tradition focuses on interactions with clients and customers. However, emotion management also is important in other contexts, such as interactions with colleagues and superiors (Tschan, Rochat, & Zapf, 2005), as well as in private life (Argyle, 1987; Gross, Richards, & John, 2006; Sanz-Vergel, Rodríguez-Muñoz, Bakker, & Demerouti, 2012). Grandey et al. (2013) suggest to use the term "emotion work" for emotion regulation in this wider sense that is not necessarily tied to an exchange against wage, nor restricted to interactions with clients; our study deals with emotion work in this sense.

Emotion regulation may be achieved in (at least) two different ways, namely deep acting (DA) and surface acting (SA). DA refers to changing the emotion one feels, as when psychiatric nurses appraise aggressive remarks by a patient in terms of the patient's illness, and thus change their emotional reaction from anger to empathy. In terms of the emotion regulation model by Gross and colleagues (e.g. Gross & Thompson, 2007), DA constitutes an antecedent-focused strategy. By contrast, SA refers to regulating the display of emotions, as when retaining a neutral expression when being angry, or displaying enthusiasm about a superior's idea while actually having a neutral attitude at best (Removed for Masked Review). SA constitutes a response-focused strategy (Gross & Thompson, 2007); it does not change the underlying emotion when the emotion felt is negative; however, the experience of positive emotions is somewhat attenuated when people try to suppress them (Gross, 2014). Importantly, negative effects of emotion regulation occur mostly when people use SA, but not when they use DA (Grandey et al., 2013). In SA, there is a discrepancy between the emotion one feels and the emotion one shows; this discrepancy is called emotional dissonance (see Grandey et al., 2013). In some instances, one may automatically show the desired emotion, in which case emotion regulation is automatic (Gross & Thompson, 2007;

Zapf, 2002). Typically, however, suppressing the display of the emotion felt is a conscious and deliberate process (Diefendorff & Grosserand, 2003; Glomb & Tews, 2004; Zapf, Vogt, Seifert, Mertini, & Isic, 1999), as the display of the emotion felt has to be actively inhibited (Gross & Levenson, 1997); it has repeatedly been shown that his process consumes regulatory resources (Baumeister & Vohs, 2007; Muraven, Tice, & Baumeister, 1998). It is this regulatory effort that is thought to be a major source of strain caused by SA (Brotheridge & Lee, 2002; Diefendorff, Erickson, Grandey, & Dahling, 2011; Grandey, Fisk, Mattila, Jansen, & Sideman, 2005; Holman, Chissick, & Totterdell, 2002; Hülsheger & Schewe, 2011; Sanz-Vergel et al., 2012; Zapf, 2002). Experimental studies have confirmed that SA involves regulatory effort and is associated with negative effects. Along these lines, suppressing emotional expressions has been found to be associated with higher sympathetic activity (Gross & Levenson, 1993; Gross et al., 2006; John & Gross, 2007). Participants instructed to follow display rules when dealing with a hostile customer showed more SA, and were more exhausted (Goldberg & Grandey, 2007). Thus, not only have the negative effects of SA on well-being been confirmed repeatedly, including meta-analyses (Hülsheger & Schewe, 2011; Kenworthy et al., 2014); many studies have also confirmed the role of regulatory effort in this process. In line with most previous research, we therefore posit that emotion regulation effort in social interactions predicts poorer psychological well-being immediately after the interaction.

Hypothesis 1: The higher the effort invested in regulating one's emotions during a social interaction, the poorer is well-being immediately after the interaction.

Goal Attainment and Well-Being

A positive association between goal achievement and well-being has been documented across various domains of psychology (Argyle, 1987; Diener, 1984; Emmons, 1986; Nix, Ryan, Manly, & Deci, 1999). A number of modifiers, such as goal concordance,

(Sheldon & Houser-Marko, 2001) or goal difficulty (Wiese & Freund, 2005) notwithstanding, researchers agree that making progress towards, or attaining, goals is a crucial element in the promotion of well-being (Carver & Scheier, 1990; Diener, Suh, Lucas, & Smith, 1999; Ryan & Deci, 2001). Such findings have been obtained in a variety of domains, ranging from academic performance (Brunstein, 1993; Elliot, Sheldon, & Church, 1997), life goals (Messersmith & Schulenberg, 2010), sport performance (Smith, Ntoumanis, & Duda, 2007) to developmental goals settings (Bauer & McAdams, 2004).

Whereas much of this research is concerned with rather long-term goals, reaching goals can also be investigated in terms of daily experiences. Affective events theory (AET; Weiss & Cropanzano, 1996) considers success in goal attainment as a positive event that boosts well-being, whereas failure to reach a goal is considered a negative event that impairs well-being (see Ohly & Schmitt, 2013). In line with this reasoning, a daily diary study at work conducted by Harris, Daniels, & Briner (2003) confirmed that daily goal attainment predicted affective well-being at the end of work days.

In terms of the goals investigated, many studies focus on task, personal, or performance goals. Less attention has been given to goals that are *inter*personal in nature, referring to goals one would like to attain in interactions with others (exception, Fishbach & Ferguson, 2007; Gable, 2006; Palomares, 2008). However there is no reason to assume that reaching goals in social interactions should not be associated with enhanced well-being, as has been shown for goal attainment in general. We therefore postulate:

Hypothesis 2: The higher the degree of goal attainment during a social interaction, the better is well-being immediately after the interaction.

Goal Attainment as a Moderator of Regulatory Effort and Well-Being

When people use SA to reach goals in social interactions, reaching these goals should affect the consequences of SA. Specifically, reaching one's goals may be seen as worth the

effort involved in SA, and thus offset the negative effects of regulation effort, at least to some degree. Thus, to the degree goals are attained in the social encounter, the detrimental effect on well-being that is due to the regulatory effort should be diminished. Statistically speaking, goal attainment should serve as moderator of the effect of regulatory effort on well-being. We therefore postulate:

Hypothesis 3: High goal attainment buffers the detrimental association of regulatory effort during a social interaction with well-being after the interaction.

Method

Participants

One hundred and fifteen participants were recruited, all of which provided data that contained no, or very few, missing data and could be used for our analyses. Participants were recruited by research assistants of the Work and Organizational Psychology program of a university in the French-speaking part of Switzerland. Participants worked in a wide range of occupations, such as sales, commerce, management, food and beverages, medical services, education, and research; 60.87% of them were female; mean age was 34.69 years (*SD*= 14.22; range from 18 to 66). Level of education varied from compulsory schooling (9 years) through professional training to a university degree. Participants were recruited on a voluntary basis. No compensation was provided.

Study Design and Procedure

In line with similar studies on daily social interactions (Removed for Masked Review), the current study contained two major components, (1) a general questionnaire and (2) booklets for recording daily interactions (7 days). The general questionnaire asked for demographics, job descriptions, and personality traits. The booklets were adapted from the Rochester Interaction Record (Reis & Wheeler, 1991); they referred to social interactions of the participants at work as well as in their private lives. More precisely, during seven

consecutive days, participants filled out one interaction record for every social encounter they had with others, provided that its duration was at least 10 minutes; shorter interactions should also be included if the participant considered the encounter as important.

To familiarize them with the study materials and design, each participant had a personal meeting with a research assistant before the study started. The research assistants were trained to follow a protocol during these meetings; they first explained the logistics and the confidentiality of the study. They also briefed participants that the main purpose of the study was to examine emotions with regard to work and with regard to their private lives. Upon consent to enroll, participants were provided with the materials; these included the researcher's contact information, a general questionnaire, seven separate booklets containing records for a day's worth of social interactions, and seven stamped envelopes for mailing back the daily booklets each day. Participants were also instructed about what a social interaction meant in our study (i.e. an encounter with one or more other people during which they mutually adjusted their behavior); and what was not considered an interaction (e.g. waiting for a bus with other people); they were asked to report interactions that either lasted at least 10 minutes or, if shorter, they considered it as important. They were asked to fill in the interaction records as soon as possible after the social interaction. During the meeting, the participants also filled out a sample interaction record with guidance from the research assistant, so questions and misunderstandings could be clarified.

Measures

All material was in French; back translation procedures were performed with all instruments from other languages.

General questionnaire (person level). The general questionnaire asked about demographic information such as age, gender, occupation, job nature, and level of education. Neuroticism and extraversion were assessed with five items each, using a short 25-item

version of the Big Five personality test (Schallberger & Venetz, 1999); reliability was alpha = .79 for neuroticism, and .73 for extraversion. We controlled for gender and age, as they have been found to be associated with differences in emotion regulation processes (Hall, Carter, & Horgan, 2000). We also controlled for neuroticism and extraversion, as they reflect a general tendency to experience negative and positive emotions, respectively.

Daily social interaction record (interaction level). For each social interaction, participants indicated whether the relationship with their interaction partner(s) was work related (e.g., colleague, superior, client, subordinate) or private (e.g., family or friends) in nature[1]; they also indicated whether they had an objective (i.e. a goal) during the interaction and to what degree they attained that goal. As this study focuses on goal attainment, interactions for which participants indicated having no goals were excluded from the analyses. Examples for such interactions without a goal were casual chit-chatting, dining or having coffee with family, friends, or colleagues; examples for interactions containing a goal are meeting with a client, having a job interview, or discussing schooling matters for the children.

Regulatory effort. For each interaction, participants were asked, "*How much effort did you invest to manage your emotions during this social interaction?*", with answers ranging from 1 (*little effort*) to 5 (*a lot of effort*).

Degree of goal attainment. To assess the level of goal attainment, we asked: "*Have you attained your goal in this interaction?*" on a scale from 1 (*not at all*) to 5 (*absolutely*);

Well-being after the interaction. Based on Diener's concept of well-being in terms of affect and satisfaction (Diener, 1984; Diener, Emmons, Larsen, & Griffin, 1985), well-being was assessed by two questions, one asking "*Are you satisfied with the interaction?*" on a

[1] There are other possibilities to test work against private, for instance by asking where the interaction occurred. Results do not change appreciably, however.

scale from 1 (*very unsatisfied*) to 5 (*very satisfied*), and the other one asking "*After this interaction, how do you feel?*" on a scale from 1 (*very bad*) to 5 (*very good*). Cronbach's Alpha was .75 across all interactions, and .76 for interactions containing a goal.

Emotions experienced during the interactions (control variable). The emotions that are being regulated in social interactions may be positive or negative, with negative emotions felt being much more frequent than positive emotions felt (Hülsheger & Schewe, 2011). It seems quite possible that the emotion felt influences well-being after the interaction; this is especially true for negative emotions, as regulating the display of negative emotions does not change the negative emotion felt (Gross & John, 2003). We therefore controlled for positive and negative emotions experienced, to make sure that any effects of regulatory effort are not actually due to the underlying emotion felt. The Geneva Emotion Wheel (GEW), a self-report instrument of emotion developed by Scherer (2005), asks about a variety of discrete emotions, such as pride, joy, interest, fear, anger, sadness, and assesses their intensity on a scale from 0 to 4. We calculated mean composite scores separately for positive emotions (i.e. mean intensity of interest, happiness, pride, joy, pleasure, tenderness, enthusiasm, relief, and compassion) as well as for negative emotions (i.e. mean intensity of anger, contempt, disgust, disappointment, anxiety, sadness, embarrassment, shame, and guilt). Mean scores for positive and negative emotions felt were used as control variables.

Context: Work versus Private (control variable). Participants also indicated with whom they were interacting. Private context was coded for interactions with family and friends; work context was coded for interactions with superiors, colleagues, and clients.

Analyses

All analyses were carried with SPSS 22 (Hox, 2010). As the social interactions are nested within participants, multilevel analysis is appropriate. Variables relating to the social

interactions are considered Level 1, variables relating to individuals are considered as level 2 variables.

Centering. Our analyses focused on associations between level-1 variables (goal attainment; regulatory effort during; and well-being after an interaction). Furthermore, we proposed a statistical interaction between goal attainment and regulatory effort. For both questions, group-mean centering (cmc) of continuous level-1 predictors is appropriate (Enders & Tofighi, 2007; Hox, 2010). Level 2 continuous variables were grand mean centered (gmc); categorical variables such as gender and setting (private vs. work), for which 0 is a meaningful value, were not centered.

Control variables. Entering control variables in analyses is increasingly being discussed as potentially problematic, and many authors recommend presenting analyses with and without control variables (Aguinis & Vandenberg, 2014; Spector & Brannick, 2011). We therefore present several models, with and without control variables, to demonstrate their effect.

Results

Descriptive Statistics

A total of 3407 social interactions were reported, implying a mean of 29.63 interactions per participant; 1907 (56%) referred to the work context, 1500 (44%) to the private context. Of all interactions, 49.7% were reported to contain a goal; only these interactions were selected for analyses. Table 1 contains the means, standard deviations, and intercorrelations of all Level 2 (person) variables and Level 1 (social interaction) variables.

Variability of Well-being across Individuals

To test whether multilevel modeling was appropriate, we calculated a null model; the ICC (percentage of well-being variance between individuals) was 13.41%. Thus, we

concluded that multilevel analyses were appropriate for these data (Heck, Thomas, & Tabata, 2010).

Test of Hypotheses

Multilevel results are displayed in Table 2.

Hypothesis 1 postulated that regulatory effort during social interactions would be associated with diminished well-being. Controlling for gender, age, extraversion, neuroticism (Level 2), for setting (private vs. work) as well as for positive and negative emotions experienced during the interaction (Level 1), regulatory effort was negatively associated with well-being after the interaction (b = -.18, SE = .02, p <.001). Thus, Hypothesis 1 is supported.

Hypothesis 2 postulated that goal attainment predicts higher well-being. Goal attainment, added in Model 3, was positively associated with well-being after the social interaction (b = .28, SE = .02, p <.001). Thus, Hypothesis 2 is supported.

Hypothesis 3 postulated that high goal attainment would buffer the detrimental effect of regulatory effort on well-being. As shown in Model 4a, the interaction of regulatory effort and goal attainment in predicting well-being was significant (b = .04, SE=.01, p = .001). To illustrate this moderation, we plotted an interaction graph (Dawson & Richter, 2006), see Figure 1.

Regardless of the level of goal attainment, well-being after the interaction decreased as regulatory effort increased; both slopes were significant (for low goal attainment, b = -.19, p < 0.001), and for high goal attainment, b = -.10, p < 0.001). The importance of goal attainment manifests itself in two ways: First, independently of regulatory effort, well-being after the interaction was higher under conditions of high, as compared to low, goal attainment; this reflects the main effect of goal attainment. Second, as indicated by the significant interaction term, well-being decreased less when goal attainment was high, supporting the buffering effect postulated in Hypothesis 3. As the graph in Figure 1 indicates,

well-being after a social interaction is at 3.49 for low goal attainment but at 4.16 for high goal attainment when regulatory effort is high (1 *SD* above the mean). For low regulatory effort, these values are 3.89 for low, and 4.38 for high goal attainment.

Discussion

The primary aim of the study was to examine whether successful goal attainment in social interactions would be associated with better well-being after the interaction, and would reduce the negative impact of regulatory effort on well-being. The findings supported our hypotheses. First, we could confirm that regulatory effort indeed was associated with diminished well-being after the social interaction (Hypothesis 1). Second, high goal attainment was, indeed, associated with increased well-being after the social interaction (Hypothesis 2). Lastly, goal attainment moderated the negative effect of regulatory effort on well-being, which was less detrimental under conditions of high goal attainment (Hypothesis 3).

These findings are consistent with a functional approach to emotions (Cote, 2005; Fischer & Manstead, 2008; Van Kleef, 2009); they support the view that emotion regulation in social contexts can be regarded as instrumental for attaining goals (Tamir, Mitchell, & Gross, 2008; von Gilsa, Zapf, Ohly, Trumpold, & Machowski, 2014). To the extent these goals are attained, the effort needed to regulate one's emotion display during social interactions seems to "pay off" to some degree, such that the negative effect of the regulatory effort is attenuated. In our study, this attenuating effect was not so strong as to eliminate the negative effect of regulatory effort, it only weakened it. Note, however, that goal attainment had a clear main effect, implying that well-being under conditions of goal attainment was better regardless of regulatory effort (Fig. 1). Considering both the main effect and the interaction effect, goal attainment does seem quite important for well-being in emotion work.

Participants indicated goals for just about half of the interactions they reported (49.7%). Thus, there were a considerable number of social interactions for which people did not report conscious goals. Although unreported, social interactions might contain unconscious goals (Gross, 2014). Maintaining a relaxed atmosphere during a coffee break in the office may constitute such a goal; it may normally be unconscious, but become activated when the atmosphere threatens to turn negative (see Beal & Trougakos, 2013). Unfortunately, we cannot distinguish between such emergent goals and goals set in advance.

We are well aware that the number of factors potentially influencing well-being after an interaction is by no means exhausted by our study. Specifically, as mentioned by an anonymous reviewer, positive experiences occurring during an interaction could enhance well-being after the interaction. To the extent that such positive experiences occur, however, our results would not be invalidated; the positive experiences would actually weaken our effects, because well-being would be better than one would expect on the basis of prediction by regulatory effort and goal attainment alone. Our results suggest just that effect: Not including emotions felt in the model yields larger coefficients for regulatory effort, goal attainment, and their interaction (See Table 2, Model 4c).

Some aspects of our results are noteworthy even though they do not specifically relate to our core question of the role of goal attainment. First, as expected, regulatory effort is positively, and quite strongly, correlated with feeling negative emotions, and negatively, albeit more weakly, with feeling positive emotions (Table 1). This result is noteworthy in light of the frequent finding that regulation of emotional expression occurs mostly when people feel negative emotions (Hülsheger & Schewe, 2011). It is also noteworthy that the effect of setting (work vs. private) is rather weak, and disappears once goal attainment is entered (Model 2 in Table 2). This finding might be an indication that, despite many possible differences, processes regarding regulatory effort and goal attainment may basically be rather

similar at work and in private settings. Finally, participants were above the midpoint in well-being even under conditions of high effort and low goal attainment. This result is not surprising, as well-being typically is above the midpoint (Diener & Diener, 1996). Also, goal attainment was rather high (3.99 on a five-point scale), so there is no reason to assume well-being values after social interactions to be low in absolute terms. These considerations imply that "low" and "high" have to be interpreted in a relative sense.

In our study, we focused on regulatory effort, which is known to be associated especially with surface acting, and much less with deep acting (see e.g., Grandey, 2003). We therefore interpret our results concerning effort to be mainly due to surface acting; however, we are well aware that this is our interpretation. This interpretation is plausible given what has been established in the literature, but it cannot be directly demonstrated with our data, as we asked about effort and not about surface acting.

To the extent that our results are, indeed, mainly due to surface acting, they show that investing effort to regulate emotion display may well be "worth it" in terms of achieving goals, which, in turn, may enhance well-being and to some degree attenuate negative effects of regulatory effort. The high value for goal attainment (3.99 on a scale from 1 to 5) indicates that the "success rate" may be rather high, at least from the perspective of our focal participants.

An anonymous reviewer raised the intriguing question if there might be a mediation rather than (or in addition to) a moderation. Indeed, high effort may indicate an especially difficult situation (in terms of situation characteristics and/or in terms of one's competence to deal with such a situation), and thus, could negatively predict goal attainment, which in turn predicts lower well-being after the interaction. This mediation was, indeed, statistically significant; mediation was partial, and the coefficient for effort was reduced only minimally, however (i.e., from -.18 to -.15), as shown in Table 2, Models 1 and 2. At the same time,

however, a reverse mediation makes sense theoretically as well. It is well known that not only goal attainment but already progress towards goal attainment may have positive effects (Carver & Scheier, 1990; Plemmons & Weiss, 2013), and it may indicate a reduced need for effort. Indeed, such a "reversed" mediation model also yielded a significant partial mediation, but, again, the path from goal attainment to well-being was reduced only slightly (from -.30** to -.28**). We therefore note that there is a (negative) association between goal attainment and effort but refrain from interpreting it in a directional way. These considerations demonstrate, however, the intricate nature of the processes potentially involved in the time course of the social interactions we studied, which our study cannot unravel. Disentangling them would require experimental designs and assessment of affective developments through measures that do not interrupt participants (as repeated questions would), such as physiological or observational measures, or perhaps with an interview immediately after such kind of social interaction.

Limitations and Strengths

There are several limitations to our study. First, the study is subject to common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), as all our data are based on self-report. Note, however, that we controlled for variables such as extraversion and neuroticism, as well as positive and negative emotions during the social interactions; these variables are also susceptible to common method bias, and to the extent results were due to this bias, controlling for these variables would make it difficult for our predictors to attain significance. Furthermore, common method bias diminishes the chance of detecting statistical interactions (Siemsen, Roth, & Oliveira, 2010). We postulated a statistical interaction effect as a central element of our study, and we did, indeed, find it. All these aspects make it unlikely that common method variance seriously distorted our results. Nevertheless, it is desirable to conduct further studies on this issue using non-self report indicators.

Second, some of our predictors, most notably those concerning regulatory effort and goal attainment, were assessed by single-item measures. Using more items could have yielded a higher reliability. However, more items have disadvantages as well: Asking participants to fill in questionnaires repeatedly taxes their willingness to respond quite strongly (Reis & Gable, 2000); since we asked participants to report all long-lasting or important interactions for seven days, this consideration is important in our context, and short measures, including single-item measures, are important for study like ours (Ohly, Sonnentag, Niessen, & Zapf, 2010). Furthermore, a number of studies have documented the validity of single-item measures, for instance with regard to fatigue (Van Hooff, Geurts, Kompier, & Taris, 2007), job satisfaction (Wanous, Reichers, & Hudy, 1997), or health (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006). Weighing pros and cons, we felt that the advantages of our single item measures outweighed their disadvantages.

Third, the main variables of the study (regulatory effort, degree of goal attainment, and well-being) were reported at the same time shortly after the respective social interaction. Thus, the outcome variable (well-being after the interaction) might be influenced by the emotions experienced during the interaction. To alleviate this problem, we asked our participants to report both positive and negative emotion felt during the interactions, and we incorporated these as control variables; with these controls, regulatory effort and goal attainment remained as statistically significant predictors of well-being. However, as discussed above, affective changes during an interaction (e.g. because one perceives progress towards goal attainment) cannot be captured by our study; therefore the actual causal processes involved cannot be ascertained. Note, however, that such processes would likely weaken the effect of regulatory effort that we found.

Fourth, the size of the interaction effect is not very large. As an anonymous reviewer noted, this result would likely be different when conducting an experimental study. In field

research, it is difficult to obtain large effects, and especially difficult to obtain significant interaction effects (McClelland & Judd, 1993); this difficulty is enhanced when using self-report. Nevertheless, translating the (unstandardized) regression coefficients obtained into changes in the dependent variable shows that increasing regulatory effort by one unit results in a decrease in predicted well-being of .10units when goal attainment is high. This result implies that moving from the lowest value in goal attainment (1) to the highest (5) decreases well-being by half a unit (5 x .10 = .50), corresponding to about half a standard deviation in well-being (*SD* = 1.03). Conversely, when goal attainment is low, the coefficient is -.19, implying that increasing regulatory effort by one unit results in a decrease in predicted well-being of .19 units, which in turn implies that going from low to high in effort decreases well-being by almost one unit (5 x .19 = .95), corresponding to almost a full standard deviation.

Note, however, that calculating these values at +/- 1*SD* is but a convention. For illustrative purposes, we calculated the values for +/- 2*SD*; this analysis shows that the slope for high goal attainment is no longer significant, resulting in a flat slope (b = -.05, t = -1.67, *ns*) for the high goal attainment conditions. By contrast, the slope for low goal attainment is b = -.23 (t = -7.24, $p < 0.001$).

Calculating the values for this type of analysis reveals that during highly effortful encounters, the well-being would increase from 3.14 in situations where goal attainment is low, to a value of 4.51 when goal attainment is high. This difference corresponds to 1.33 unit *SD* of well-being, which seems quite substantial. Note that the values calculated at +/- 2*SD* are likely to correspond more closely to effects one would expect in an experiment (see Cohen, Cohen, West, & Aiken, 2003, p. 298). Given the many influences that are to be expected in real-life situations, and the controls for emotions felt, which lowers the coefficients considerably (see Table 2, Models 4b and c), we feel this interaction effect, although not particularly strong, is not negligible.

Fifth, we did not specifically ask about surface acting and deep acting, but only on the effort needed to manage one's emotions. Given that is well established that surface acting, rather than deep acting, is responsible for high effort in emotion work, we propose that the strategy employed likely was mainly surface acting, but this conclusion is a tentative one, as it goes beyond our data.

Sixth, as we were interested in the role of goal attainment, we could conduct analyses only for those interactions for which participants reported a goal. As illustrated above, situations with and without a conscious goal are quite different, the latter typically consisting of informal situations in which people simply chat, have a coffee together, or the like. When interpreting our results, one should keep in mind that they do not refer to this latter, very informal type of "no-goal" situations. Following the suggestion of an anonymous reviewer, we also tested if having a goal predicted well-being (see Emmons, 1986; Klein, Cooper, & Monahan, 2013); this was the case (b = .07, SE = .026), but there was no interaction with regulatory effort, which remained a significant predictor (b = -.17, SE = 018), as did emotions felt. Note, however, that the positive association between having a goal and well-being implies that restricting our analyses to participants with a goal also restricted the range in well-being.

Lastly, our result may not generalize across cultures. Research suggests cultural differences with regard to emotional experience (e.g. Shiota, Campos, Gonzaga, Keltner, & Peng, 2010) and emotional display (Matsumoto, 2010) during social interactions. Our study was conducted in Switzerland, more specifically in the French-speaking part of Switzerland, and it is unclear to what extent they apply beyond this area.

Our study contains some strengths as well. We believe that our investigation contributes to the field of emotion work by demonstrating that successful goal attainment partially compensated for the costs of investing regulatory effort in social interactions (cf.

Diefendorff & Gosserand, 2003). It is well known that the regulatory effort involved in emotion work often leads to unfavorable personal outcomes (Hülsheger & Schewe, 2011; Kenworthy et al., 2014). To the extent that regulating one's emotional display is unavoidable in certain social situations, it therefore is very important to identify "antidotes" that can attenuate negative effects; although more future empirical evidence is warranted, goal attainment seems to be a major candidate. In a broader sense, our study contributes to establishing closer links between the area of emotion work and other areas, most notably goal setting theory (Locke & Latham, 2013), but also effort-reward imbalance (Siegrist, 2002), as goal attainment might be regarded as a reward.

Implications for Research

There are several avenues for future research. First, it certainly is desirable to replicate this study, preferably outside of Switzerland. Furthermore, our study focused on momentary experiences during, and after, a social interaction. Further research should also investigate long term effects: Does frequent goal attainment in social interactions during which people regulate their emotions have positive effects on long-term well-being? If our results do replicate, goal attainment should be incorporated into models of emotion work in a more systematic fashion than has been done so far. Second, we have focused on regulatory effort. Our finding that goal attainment attenuates, but does not eliminate the effects of regulatory effort, suggests that additional variables should be considered. One candidate for such a variable would be feelings of inauthenticity that are associated with emotional dissonance, which can be considered another important predictor for impaired well-being (Grandey et al., 2013). Third, research should focus more strongly on the fact that emotion regulation during interactions may change. One such change refers to emerging goals, which may be activated when one realizes that the interaction offers an opportunity to achieve a goal originally not envisaged; or when unconscious, "dormant" goals, such as maintaining a good atmosphere,

are being threatened. Other changes may relate to the degree one is approaching a goal. It is well established that regulatory capacity is a limited resource, which is reduced by using it. It is also well known that not only achieving goals, but also moving towards them, induces positive affect (Carver & Scheier, 1990), and this may happen during a social encounter as one realizes that he or she is approaching a goal. Tice, Baumeister, Shmueli, & Muraven (2007) have shown that positive affect can restore self-regulatory capacity. It therefore seems possible that recognizing progress towards a goal during an interaction may induce positive affect, which, in turn, can restore regulatory capacity and thus reduce the effort that has to be invested. To the extent that such a process occurs, goal attainment may act, in addition to the postulated interaction effect, by reducing regulatory effort; the negative correlation between goal attainment and effort in our data would be in line with that argument (see Table 1). Last but not least, the effects we found should be investigated using an experimental design. It was not surprising that the interaction effect of regulatory effort and goal attainment we found was rather small, as the number of factors that can be controlled in a field study is always limited. Thus, a future laboratory study with tighter controls might yield stronger effects than the ones we found.

Regarding practical implications, the emphasis with regard to training efforts has mostly been on deep acting (Grandey, 2003; Pugh, Diefendorff, & Moran, 2013). However, for many social interactions, deep acting is not very feasible (e.g., in occupations where people have many but short interactions). Focusing on the development of social skills, and thus supporting people in achieving goals, may be a reasonable option, and skillful surface acting may well be part of these broader social skills. To the extent that high social skills foster goal attainment, they should produce a) a main effect through goal attainment, and b) an interaction effect in terms of buffering effects of effort; given the interaction effect is not very strong, however, a noticeable difference in goal attainment would be required.

Final Remark

Research on emotion work has, to a large extent, been aligned with the field of emotions in general, and emotion regulation specifically. It seems that incorporating other research domains can be promising. One such domain relates to goals, and our research shows that attaining goals in social interactions may attenuate the negative effects of regulatory effort on well-being after social interactions.

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Some references are removed in this copy for masked review.

Table 1.

Means, Standard Deviations and Correlations Between Level 2 & Level 1 Variables

	LEVEL 2	Range	*M*	*SD*	1	2	3	4	5
1	Gender (female = 0; male = 1)	0-1	0.38	0.49	1				
2	Age	18-66	34.69	14.22	-0.1	1			
3	Extraversion	1-6	4.19	0.83	-0.02	-.22*	1		
4	Neuroticism	1-6	2.8	0.8	-.22*	0.12	-.23*		
	LEVEL 1								
1	Positive Emotion Felt (Control Variable)	0-4	0.93	0.73	1				
2	Negative Emotion Felt (Control Variable)	0-4	0.25	0.43	-.19**	1			
3	Emotion Regulatory Effort	1-5	1.89	1.21	-.19**	.52**	1		
4	Degree of Goal Attainment	1-5	3.99	1.2	.23**	-.38**	-.30**	1	
5	Well-being	1-5	3.99	1.03	.42**	-.56**	-.48**	.55**	1
6	Context: Private (0) vs. Work (1)	0-1	0.67	0.41	-.17**	-0.04	<.01	.10**	<.01

N = 115 employees, *n* = 1670 social interactions containing a goal pursuit. Context: Private (0) vs. Work (1)

* $p < .05$, ** $p < .01$ (two-tailed).

Note. *n* is slightly lower than 1674 social interactions due to missing values.

Table 2.

Predicting Well-being in Everyday Social Interactions by Regulatory Effort and Goal Attainment

	Unconditional	**Model 1**	**Model 2**	**Model 3**	**Model 4a**	**Model 4b**	**Model 4c**
Variables	(Intercept Only) Estimate (SE)	(Level 2 Predictors Only) Estimate (SE)	(Hypothesis1) Estimate (SE)	(Hypothesis2) Estimate (SE)	(Hypothesis3) Estimate (SE)	(Hypothesis 3 without Level 2 Predictors) Estimate (SE)	(Hypothesis 3 without any Covariates) Estimate (SE)
Intercept	3.98 (.04)**	4.00 (.05)**	3.94 (.06)**	3.99 (.06)**	4.01 (.06)**	3.99(.05)**	4.00 (.05)**
Level 2							
Gender (f = 0, m = 1)		-.05(.09)	-.03 (.09)	-.02 (.09)	-.03 (.09)		
Age		<.01 (<.01)	<.01 (<.01)	<.01 (<.01)	<.01 (.01)		
Extraversion		.11(.05)*	.09 (.05)	.09 (.06)	.09 (.05)		
Neuroticism		-.12(.06)*	-.11 (.06)	-.11 (.06)	-.11 (.06)		
Level 1							
Private (0) vs. Work (1)			.08 (.04)*	.01 (.04)	.01 (.04)	.01 (.04)	
Positive Emotions Felt			.49 (.03)**	.40 (.03)**	.40 (.03)**	.40(.03)**	
Negative Emotions Felt			-.89 (.06)**	-.68 (.05)**	-.67 (.05)**	-.67(.05)**	
Emotion Regulatory Effort			-.18 (.02)**	-.15 (.02)**	-.14 (.02)**	-.14(.02)**	-.29(.02)**
Goal Attainment				.28 (.02)**	.27 (.02)**	.27(.02)**	.37(.02)**
Interaction: Regulatory Effort X Goal Attainment					.04 (.01)**	.04 (.01)**	.06(.01)**
-2 Log Likelihood	4797.49	4787.16	3750.52	3483.7	3472.84	3480.86	3878.77

N= 115 employees, n = 1674 social interactions at work and in private involving goal pursuit

Note. Coefficients are unstandardized regression coefficients; * p <.05, ** p <.01 (two-tailed).

Level-2 predictors are grand mean centered; Level-1 predictors are group mean centered. Categorical variables are not centered.

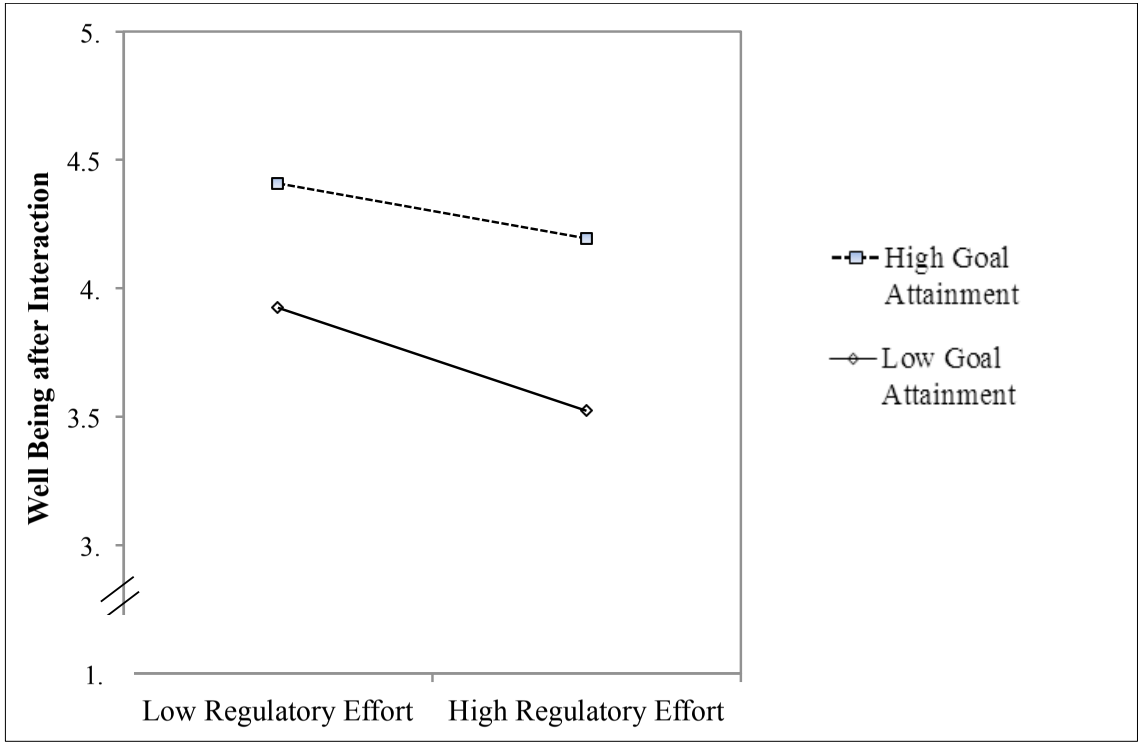

Figure 1. *Interaction of goal attainment and regulatory effort on well-being in social interactions.*

Note. Low Goal Attainment / Effort (- 1*SD*); High Goal Attainment / Effort (+1*SD*).

Chapter 7

Discussion

The main objectives of the research studies were achieved. In the discussion chapter, I first summarize the main findings for each of the studies below. Next, I discuss how these findings would draw theoretical implications, as well as implications for practice. Then, I will discuss how these research findings contribute to resolving problematic areas we identified in Chapter 3 (the justification of research) and provide some future direction of research. Lastly, general limitations will be discussed and future remarks will provide a conclusion to the studies.

7.1 Summary of Findings

In the *first* study, the goal was to identify which type of emotion regulation (response focused ER) might be associated with regulatory effort in social interactions. The exploratory analyses successfully identified suppression of negative emotion and amplification of positive emotion as strong predictors of high regulatory effort. The polynomial multilevel regression methodology further allowed us to identify congruence emotion felt and shown that might influence regulatory effort independent of the type of emotion regulation strategies used. As predicted, high negative and low positive emotion congruencies are a clear indicator of high regulatory effort in social interactions. As far as we know, these kinds of systematic polynomial analyses that include both emotion experience and emotion regulation in the same model had not been performed before.

In the *second* study, our primary goal was to investigate whether positive emotion expression and its amplification would boost goal attainment during social interactions at work. Our secondary goal was to investigate whether this effect on goal attainment would affect interactions with superiors versus interactions with colleagues differently. The finding demonstrated that authentic positive emotion expression would affect both superiors and colleagues to boost goal attainment. However, amplification of positive expression would *only* be effective for goal attainment when interacting with superiors, not when interacting with colleagues. Not only did the study establish an empirical link between positive expression, its amplification and goal attainment at work, but it also informed us of the importance of studying the influence on different kinds of interaction partners in social interactions.

In the *third* study, our goal was to investigate: 1) whether individual effort would impair well-being after social interactions; 2) whether a high goal attainment would boost such well-being; and 3) whether goal attainment could successfully moderate the relationship of regulatory effort to well-being by reducing the negative impact on well-being. All of these hypotheses were supported. This study highlighted the need to include the variable of goal attainment when examining the subject of emotion regulation, in particular to the context of emotion work.

7.2 Theoretical Implications

Our findings carry sufficient weight in both theoretical, and practical, implications to research in the subject of emotion regulation in social settings.

7.2.1 Importance of goals in the study of ER

As illustrated by the findings (in Study 2 and 3), goal attainment is an important variable to consider in the study of ER in social settings. Thompson (1994, p. 29) argued that goal attainment is a "central definitional feature" that explains emotion regulation behaviors and its regulatory effort. Tied to the social functional perspective of emotion, regulation of emotion in the given social context could actually function to coordinate social interactions (Keltner, 1999) and help boost goal attainment (Diefendorff & Gosserand, 2003). In this sense, emotion regulation could be considered an effective strategic means for reaching goals in social situations (demonstrated in Study 2). Success in goal attainment is crucial in our daily lives: this need to reach goals could motivate individuals to engage in emotion regulatory behavior and in the process, pay the toll of regulation that is socially demanded (Thompson, 1994). This, in fact, is confirmed by the findings (Study 3) that success in goal attainment could improve well-being in social interactions and thus, serve to reduce some negative impact of the expenditure on emotion regulation. While the functionalist approach of emotion regulation has been around for decades, this aspect of how goal attainment might interact with emotion regulatory effort and alter well-being outcome has not yet been highlighted. Including goal attainment is therefore especially important in the study of ER. Our studies are the first to include goal attainment as a study variable to investigate emotion work in an interpersonal context, and we were able to confirm such a relationship.

7.2.2 Re-evaluate the cost and benefit analysis on emotion work.

The findings (Study 3) of how goal attainment could influence the outcome of well-being allow us to take a drastically different perspective on evaluating the cost and benefit of emotion work, which had generally adopted a negative reputation in the literature. This more balanced outlook on emotion work had been suggested by literature earlier on. Aligned with findings from Study 2, Ashforth and Humphrey (1993) argued that instead of perceiving emotion labor as a stressful act, emotion labor could alternatively be seen as an act to reach goals by managing our

impressions. As impression management describes the process in which individuals convey or maintain an impression they would like others to perceive with the intention to reach their desired goals and objectives (Goffman, 1959), there exists a similar nature between impression management and emotion work that should not be ignored.

According to Hochschild's own narrative (1979), her creation of emotion work was borrowed heavily from Goffman's *Presentation of Self in Everyday Life* (1959), in which Hochschild stated that impression management does not convey deep acting. But impression management is essentially surface acting, as they both concern how individuals manage what they appear to feel. Both concepts originated from "*symbolic interactionism*" theories (Grove & Fisk, 1989), which stressed how all everyday micro level social interactions provide meaning and influence the individuals. Both being heavily dependent on social contexts, impression management and surface acting rely on the external environment to inform and guide how one should act or react "appropriately" to situations (Hochschild, 1979). In this original perspective proposed by Hochschild, surface acting strategies were not necessarily considered as harmful as later literature portrayed, as surface acting does indeed serve as a necessary move to conform to the feeling rules of the society and workplace.

Although people might not like to be associated with the negative connotation or the inauthenticity of impression management, or of surface acting, "*most individuals do engage in impression management from time to time*" (Ashforth & Tomiuk, 2000, p. 200) to serve their unique role. By engaging in emotion labor, task effectiveness and performance could ensue (e.g. Ashforth and Humphrey, 1993). This view poses some advantages of emotion labor to balance out the overly negative claims and findings in the field. Moreover, John and Gross (2004) discussed how there could be healthy and unhealthy emotion regulation mechanisms employed in everyday lives. Some factors could determine *when* people perform ER adaptively. Our studies identified goal attainment as one of the prominent factors that determine the outcome of ER, which, in turn, helped answer part of the long posed queries on evaluating the costs and benefits of emotion work. After all, surface acting might not be as harmful as suggested by most research, such as in situations when goals are attained. In fact, emotion work could yield benefits, depending on which side of the lens you are looking from.

7.2.3 Positive expression and amplification in the workplace

The result of Study 2 clearly demonstrated how positive emotion expression and its regulation could be beneficial to interpersonal outcomes, as they are associated with higher goal attainment in the workplace. This finding is supported by the argument of Staw et al., (1994), in which they discussed several reasons and the possible mechanisms of how employees' positive emotions could lead to favorable outcomes, such as higher work achievement and more social support. Prior to our study, empirical studies on positive emotion expression and its regulation have been neglected with a few exceptions (Harker & Keltner, 2001; Staw et al., 1994). Perhaps due to how traditional perspectives on emotion regulation have heavily emphasized negative suppression as the primary means of response focused regulation (Surface Acting), quite a lot of work on emotion work and emotion labor has the assumption that people are indeed performing suppression of negative emotion when they are referring to these terms. Given that a large sum of evidence from positive psychology has illustrated how being positive and expressing positive expression could produce better outcomes (Harker & Keltner, 2001; Lyubomirsky et al., 2005), there is a strong need to integrate findings from different studies, that illustrate the benefits of expressing and amplifying positive emotion in order to examine emotion regulation (SA) with a more balanced "positive" outlook.

7.2.4 Building a positive professional image at work

Extending the findings from Study 2, I discuss how expressing positive emotion, could, by and large, convey a positive impression at work. Emotion researchers have argued that management of impression is one of the main social functions in which people regulate their emotions (e.g. Manstead & Fischer, 2000). Literature has suggested that success could be induced by presenting and building a positive professional image (Cote & Morgan, 2002). Individuals tended to associate people who smiled as "*extraverted, emotionally stable, agreeable, sociable, pleasant, likable, and intelligent*" (Harker & Keltner, 2001, p. 114). Strategically adopting a positive expression could convey pleasant qualities to others, which helps form a good impression in the perception of others (Grandey, et al., 2005). Positive emotion expression could help create and sustain a positive professional image at work associated with competency (Grandey, et al., 2005; Jones & Pittman, 1982). Research has found that positive emotion display of a service agent could help fulfil their impression management purpose (Grandey, et al., 2005). Poll workers who

displayed positive emotions were more successful in influencing the mood of the people, generating favorable attitude in respondents (Trougakos et al., 2011). In a similar vein, it has been long known that ingratiation technique, an effective form of impression management (Schlenker, 1980) which involves flattery and paying compliments, could be used to get others to like us or to become socially attracted to us. This technique involves creating a positive likable image, and thus, a positive emotion expression such as happiness is often associated (Schlenker, 1980). Both ingratiation and positive emotion in employees led to higher liking and higher performance rating, respectively (Staw et al., 1994; Wayne & Liden, 1995). For these reasons, it is quite plausible that one could create a positive image at work by displaying positive emotion expression. Building such positive images could potentially drive positive outcomes for an individual; which could then ripple out in teams and in organizations to create a better workplace (Barsade & Gibson, 2007). Drawing on these findings, we hope that more research on emotion work will incorporate the perspective in which more emphasis would be placed on beneficial outcomes that positive professional image would induce.

7.3 Implication for Practice

With the knowledge of how effort of performing ER could indeed be justified by goal attainment, training on emotion work could place more emphasis on how managing expression of emotion could be beneficial for goal attainment. At the same time, such training could help trainees to explore and gain awareness on the upside and the downside of emotion work. This could be achieved by helping audiences discover *why* they would want to perform emotion regulation in a social setting. Despite how some organizations or industries imposed their display rule requirement by sanction, employees could gain insights on why performing ER could help fulfill some of their personal desires and wishes, not only as a professional duty. In the process of doing so, they could probably be receiving training on the healthier cognitive appraisal techniques beyond surface acting. Modifying one's emotion to suit the situation could also become an adaptive strategy to acquire what they personally need. Last but not least, employees should be informed of the benefits of expressing positive emotion, especially at times when they already feel a genuine underlying positive emotion. Training could also highlight the importance of forming and portraying a positive image at work, and needless to say, in circumstances that would allow them to do so.

7.4 Our Contributions and Future Directions for Research

This research contributes in terms of how it serves to clarify and tackle some specific existing issues or areas of concern in the study of emotion and emotion regulation, particularly to those we identified earlier in Chapter 3. To reiterate, these issues were: 1) the need to distinguish emotion felt and emotion shown when studying emotion regulation; 2) mixed findings on the consequences of emotion work; 3) lack of study on involving goal attainment in the field of ER; 4) negligence on the role of positive emotion expression in social interactions; and 5) little research that considers how the type of interaction partner would influence interpersonal outcome.

First, we resolved the critical issue of unwanted lost information in emotion research, caused by a) only focusing on specific emotion regulation strategies (Mikolajczak et al., 2009), such as on suppression of negative or positive emotion, b) neglecting the underlying emotion experience, or by c) not studying emotion felt and emotion shown as two distinct sets of variables. In Study 1 and 2, we conducted a comprehensive statistical analysis by studying both emotion felt and emotion shown as independent variables in the same model using polynomial regression. The unique feature that polynomial regression offers is that it allows us to investigate both emotion experienced (felt) and emotion expressed (shown), as independent variables in one model. This analytical method that incorporates both variables has rarely been used in emotion regulation literature; this tool carries some valuable advantages over other types of analyses, such as the different score method. It allowed us to study both emotion felt and emotion shown, and their intertwined relationship with great clarity. This line of research should consider adopting polynomial regression when the circumstances and the study design are feasible.

Second, we examined emotion regulation in the social functional approach that might better explain the good and bad consequences of surface acting/emotion work. Emotion work suffers from a poor reputation in emotion literature, where it has been largely discussed negatively. In Study 3, we demonstrated that a third factor, success in goal attainment, could actually diminish the negative impact of emotion work on individual well-being. Future research should bear in mind that the consequences of emotion work should be re-evaluated and reconsidered carefully before concluding that emotion work is always necessarily damaging for individual well-being.

Third, in resolving the lack of empirical study in goal attainment, we established a strong link between emotion work and goal attainment in Study 2. In particular, we found that emotion

work, such as positive emotion expression and emotion work of amplifying positive expression, could improve goal attainment in social interactions at work. These findings inform us that emotion expression and the management of emotion expression could, indeed, be functional for the individual when they want to achieve what they want in the social setting. In studying these issues, we answered part of the long posed query of emotion regulation literature, where healthy or unhealthy emotion regulation could be better delineated when a third factor, such as goal attainment, is added into the analysis, allowing researchers to better examine the cost and benefits of emotion work.

Fourth, breaking away from the tradition of examining the suppression of negative emotion in emotion literature, we examined what positive emotion expression and its amplification could bring to workplace setting and found that it does, indeed, improve goal attainment in an interpersonal setting. Although mentioned occasionally in the literature that positive emotion could be beneficial to workplace outcomes (Staw et al., 1994), such direct empirical research of positive emotion expression to interpersonal outcomes has rarely been researched. Given the contagious nature of emotion, future research should devote more focus to the study of positive emotion expression and the beneficial outcome it drives among teams, groups, and organizations. Moreover, future research could also examine the effect of positive emotion expression in the private interpersonal context.

Finally, the findings successfully demonstrated that the effect of emotion work might influence different kinds of interaction partners differently, thus triggering differential interactional outcome. We discovered that pertinent to the work setting, amplification of positive emotion expression could be effective to higher goal attainment only when the individual is interacting with superiors, but not when interacting with colleagues. The finding illustrates the importance of considering the role and the relationship of the interaction partner to the individual when adopting an effective emotion regulation strategy that helps improve outcome. Such focus on the interaction partner was discussed in previous research literature, yet not investigated closely in a relevant context.

7.5 General Limitations

One major limitation is that these studies are self-report in nature, a limitation that is challenging to resolve while the original aim was to record naturally occurring social interactions.

Due to the self-reported nature of the study, we were not able to directly observe the naturally occurring interaction in a real-life setting. The research suffered from a common method bias. That being said, according to recent methodological arguments, the problems of common method bias are alleviated in moderated interaction, which we employed in Study 2 and 3. Furthermore, it was argued that common method biases are weak in models that are more complex in nature. Overall, given the nature of our analyses, it is highly unlikely that the common method bias would distort the results substantially.

The second limitation is that the research was conducted using a snowball recruitment in the French speaking part of Switzerland. Therefore, the participants were subject to sampling bias. Additionally, due to the same problem of having a targeted sample, the studies did not explore cultural differences, one of the factors that could influence the study of ER. The results derived from this sample should not be generalized across various cultures and populations.

Last, adhering to our reasoning that positive emotions could help goal attainment, we focused largely on the study of positive emotion in Study 2 and as a result, negative emotions were not studied in terms of their functional aspect. More and more studies have confirmed the instrumental effect of negative emotion, people express sadness to elicit compassion and anger to correct behavior (Keltner, 1999). However, since my primary interest lies in positive psychology and positive organizational behavior, I have narrowed my focus to limit it to the study of positive emotion expression and its regulation. On the bright side, we did study and control for negative emotion whenever appropriate. Nevertheless, the study of the functional aspect of negative emotion expression is another intriguing topic on which some research has focused (e.g. Lindebaum & Fielden, 2011). However, these questions are beyond the scope of the dissertation.

7.6 Final Remark

The three research articles in this dissertation demonstrated several closely tied main themes that, as a whole, provided solid evidence that depicts the traditional and social functional aspects of emotion regulation in social interactions, and how both goal attainment and positive emotion expression take on a critical role that should no longer be ignored. Our findings confirmed that certain mechanisms of regulating emotion expression are indeed effortful during social interactions (Study 1), and it therefore, carries negative strains on individual well-being (Study 3: H1). On the other hand, some kind of regulation, such as showing authentic positive

expression and at times, amplification positive expression, could be beneficial to the individual in social settings. It could lead to higher goal attainment in workplace interactions, especially when interacting with the boss (Study 2). Because goal attainment in social interactions might lead to well-being (Study 3: H2), it might moderate and reduce the negative impact of regulatory effort to well-being (Study 3: H3), as ER, is indeed functional to the individual in social settings. All in all, this dissertation seeks to decipher and unlock some key questions on the regulation of emotion expression in hopes of better understanding interactional and individual outcomes associated with it. After all, we all are going to attend to the next interaction pretty soon!

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