EXAMINING THE EFFECTS OF DISPLAY RULE CONTENT AND INDIVIDUAL DIFFERENCES ON WELL-BEING, PERFORMANCE, AND SELF-REGULATORY RESOURCE DEPLETION

A Dissertation

Presented to

The Graduate Faculty of The University of Akron

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

Cecily J. Becker

May, 2013
EXAMINING THE EFFECTS OF DISPLAY RULE CONTENT AND INDIVIDUAL DIFFERENCES ON WELL-BEING, PERFORMANCE, AND SELF-REGULATORY RESOURCE DEPLETION

Cecily J. Becker

Dissertation

Approved:  
Advisor  
Dr. James M. Diefendorff

Accepted:  
Department Chair  
Dr. Paul E. Levy

Committee Member  
Dr. Robert G. Lord

Dean of the College  
Dr. Chand Midha

Committee Member  
Dr. Rosalie J. Hall

Dean of the Graduate School  
Dr. George R. Newkome

Committee Member  
Dr. Joelle D. Elicker

Date

Committee Member  
Dr. Rebecca J. Erickson
ABSTRACT

This study examined the causal effects of display rules on self-regulatory resource depletion, emotional exhaustion, task performance, and emotional dissonance in the context of difficult customer interactions. Using a call center simulation, participants were assigned to one of four display rule conditions to – (a) express positive (positive display rules), (b) do not show negative (negative display rules), (c) express positive and do not show negative emotions (integrative display rules), and (d) no display rule requirements. This study found that display rules had both direct and indirect effects on outcomes. Negative display rules did not have any direct effects on outcomes but positive display rules led to greater task errors and emotional dissonance. Display rules also had an effect on the strategies individuals used to regulate their emotions during the experiment. Both negative and positive display rules led to greater suppression of felt emotion and expression of unfelt emotions; negative display rules also led to less expression of felt emotions. Negative and positive display rules indirectly affected emotional exhaustion, regulatory resource depletion, and task performance through the emotion regulation strategy of suppression. Positive display rules also had an indirect effect on emotional dissonance through the regulation strategy of faking unfelt emotions. This study also examined whether individual differences (e.g., chronic emotion regulation and dispositional affectivity) moderated the effect of display rules on outcomes. Display rules interacted with chronic reappraisal, chronic suppression, and
negative affectivity to predict task errors, emotional dissonance, and self-regulatory resource depletion in the form of several two- and three-way interactions. In most instances, the effects of display rules on outcomes were stronger for individuals higher in these traits than lower in these traits. Positive affectivity did not interact with any of the display rules to predict outcomes. This study contributes to the emotional labor literature by (a) establishing the causal direct and indirect effects of various display rules on individual outcomes (b) demonstrating that display rules interact with individual differences to affect individual outcomes and by (c) linking emotional labor processes to self-regulatory resource depletion.
ACKNOWLEDGEMENTS

I would like to extend my gratitude to many people for their support and guidance during this seemingly endless process. First, I want thank my undergraduate research advisor, Suzy Scherf, for inspiring me to pursue not just a graduate degree, but a doctorate. Next, I want like to thank Jim Diefendoff. I could not have asked for a better graduate advisor and I am proud to call myself a “Diefendorffian.” Thank you for your continual support, wisdom, and guidance during my time at Akron. I would also like to thank my dissertation committee for their input. I want to thank all of my research assistants at Akron. Without your help, I would have been unable to complete this project. I wish you all the best of luck with your future endeavors!

I would also like to thank my family and friends for all their love and support. Sara Shondrick, Allie Gabriel, Darlene Thompson, and Christina Moran (+ significant others) – thanks for the MANY laughs and for being such great friends and for making graduate school fun! Mom, thank you for always being there for and believing in me, no matter what. Dad, thanks for just being proud of me. Grandma and Grandpap Roach thank you for cheering me on throughout this process. Mom and Dad Boron, thank you for encouraging me to go to graduate school, even though it meant being away from Ted for 5 years! Finally, I would like to thank my husband, Ted. During our time in graduate school we spent 5 years apart, living in two different states (sometimes different countries). Unfortunately, I still wasn’t finished with my dissertation by the time we
actually started living together. I want thank you for your love and patience and for tolerating our lack of quality time together as I spent nights and weekends working to finish this dissertation. Thanks for putting up with my crankiness during the final push of this process. I just want to let you know, it’s finally done, let’s go out!
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xiii</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. STATEMENT OF THE PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>II. LITERATURE REVIEW</td>
<td>10</td>
</tr>
<tr>
<td>Emotional Job Demands and the Evolution of Organizational Display Rules</td>
<td>14</td>
</tr>
<tr>
<td>Classifying Organizational Display Rules</td>
<td>17</td>
</tr>
<tr>
<td>The Consequences of Organizational Display Rules</td>
<td>21</td>
</tr>
<tr>
<td>III. THE CURRENT INVESTIGATION</td>
<td>33</td>
</tr>
<tr>
<td>Negative Display Rules</td>
<td>34</td>
</tr>
<tr>
<td>Positive Display Rules</td>
<td>36</td>
</tr>
<tr>
<td>Interactive Effects of Negative and Positive Display Rules</td>
<td>37</td>
</tr>
<tr>
<td>The Role of Traits: Person x Situation Interaction in Emotional Labor</td>
<td>39</td>
</tr>
<tr>
<td>Exploring the Effects of Display Rule Content on Emotion Regulation Strategies</td>
<td>47</td>
</tr>
<tr>
<td>Summary</td>
<td>49</td>
</tr>
<tr>
<td>IV. METHOD</td>
<td>52</td>
</tr>
<tr>
<td>Participants</td>
<td>52</td>
</tr>
</tbody>
</table>
viii

Procedure .........................................................................................................................54

Pre-Experimental Measures ...........................................................................................60

Experimental Measures ...............................................................................................62

Task Performance .........................................................................................................74

Post-Experimental Measures ......................................................................................75

Post-Experimental Manipulation Checks ....................................................................78

Alternative Explanations of Self-Regulatory Resource Depletion Measures .............79

Confederate Ratings of Caller Demeanor ..................................................................80

V. RESULTS ..................................................................................................................83

Manipulation Checks: Confederate Ratings of Participant Demeanor ...................84

Number of Callers .........................................................................................................85

Main Hypothesis Testing: Hypothesis 1 - 3 .................................................................85

Display Rules and Individual Differences .................................................................95

Chronic Emotion Regulation .....................................................................................96

Disposition Affectivity ..............................................................................................117

Alternative Explanations of Self-Regulatory Resource Depletion Measures ..........130

Exploratory Analyses ...............................................................................................135

VI. DISCUSSION ..........................................................................................................163

The Causal Effects of Display Rules on Outcome Variables .................................168

Display Rules and Individual Differences: What Have We Learned? .................195

Emotional Dissonance as a Mediator of Other Outcomes ......................................199

Implications for Practice .........................................................................................200

Limitations and Future Research .........................................................................206
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Study Experimental Design ..................................................</td>
</tr>
<tr>
<td>2</td>
<td>Summary of Fit Statistics for Emotion Regulation Strategies – 10 items</td>
</tr>
<tr>
<td>3</td>
<td>Summary of Fit Statistics for Emotion Regulation Strategies – 9 items (Dropping Cognitive Change Item #2)</td>
</tr>
<tr>
<td>4</td>
<td>Summary of Fit Statistics for Emotion Regulation Strategies – 8 items (Cognitive Change Items Excluded)</td>
</tr>
<tr>
<td>5</td>
<td>Summary of Fit Statistics for Emotional Dissonance .........................</td>
</tr>
<tr>
<td>6</td>
<td>Summary of Fit Statistics for Confederate Ratings of Caller Demeanor ..........</td>
</tr>
<tr>
<td>7</td>
<td>Means, Standard Deviations, and Intercorrelations of Main Study Variables ..................................................</td>
</tr>
<tr>
<td>8</td>
<td>Analysis of Covariance (ANCOVA) Results for Display Rules and Outcomes .....</td>
</tr>
<tr>
<td>9</td>
<td>Results of the Hierarchical Multiple Regression for Chronic Reappraisal and Display Rules in Predicting Outcomes (Tests of Hypotheses 4, 5, 8)</td>
</tr>
<tr>
<td>10</td>
<td>Results of the Hierarchical Multiple Regression for Chronic Suppression and Display Rules in Predicting Outcomes (Tests of Hypotheses 6, 7, 9)</td>
</tr>
<tr>
<td>11</td>
<td>Results of the Hierarchical Multiple Regression for Positive Affectivity and Display Rules in Predicting Outcomes (Tests of Hypotheses 10, 11, 14)</td>
</tr>
<tr>
<td>12</td>
<td>Results of the Hierarchical Multiple Regression for Negative Affectivity and Display Rules in Predicting Outcomes (Tests of Hypotheses 12, 13, 15)</td>
</tr>
<tr>
<td>13</td>
<td>Analysis of Covariance (ANCOVA) Results for Emotion Regulation Strategies ..................................................................</td>
</tr>
<tr>
<td>14</td>
<td>Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Self-Regulatory Resource Depletion ...........................................</td>
</tr>
</tbody>
</table>
Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Self-Regulatory Resource Depletion ......................................................143

Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Emotional Exhaustion.................................................................145

Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Emotional Exhaustion.................................................................146

Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Task Errors..................................................................................149

Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Task Errors...............................................................................149

Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Emotional Dissonance ...............................................................151

Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Emotional Dissonance .................................................................152

Direct Effect and Mediation Results for Emotional Dissonance on Negative Display Rules Predicting Outcomes ..................................................................................155

Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Negative Display Rules with Emotional Dissonance as the Mediators on Outcomes ............................................................................156

Direct Effect and Mediation Results for Emotional Dissonance on Positive Display Rules Predicting Outcomes ..................................................................................157

Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Positive Display Rules with Emotional Dissonance as the Mediators on Outcomes ............................................................................159

Summary of Significant Interactions between Display Rules and Individual Differences .........................................................................................................................167
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Model of the emotional labor process adapted from Grandey, 2000</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Interaction of positive display rules and negative display rules on grip time difference</td>
<td>89</td>
</tr>
<tr>
<td>3</td>
<td>Interaction of positive display rules and reappraisal on average errors</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>3-way interaction of positive display rules, negative display rules, and reappraisal on average errors with positive display rules as the moderator</td>
<td>102</td>
</tr>
<tr>
<td>5</td>
<td>3-way interaction of positive display rules, negative display rules, and reappraisal on average errors with negative display rules as the moderator</td>
<td>104</td>
</tr>
<tr>
<td>6</td>
<td>3-way interaction of positive display rules, negative display rules, and reappraisal on emotion-rule dissonance with positive display rules as the moderator</td>
<td>106</td>
</tr>
<tr>
<td>7</td>
<td>3-way interaction of positive display rules, negative display rules, and reappraisal on emotion-rule dissonance with negative display rules as the moderator</td>
<td>108</td>
</tr>
<tr>
<td>8</td>
<td>Interaction of positive display rules and suppression on average errors</td>
<td>112</td>
</tr>
<tr>
<td>9</td>
<td>3-way interaction of positive display rules, negative display rules, and suppression on average errors with positive display rules as the moderator</td>
<td>114</td>
</tr>
<tr>
<td>10</td>
<td>3-way interaction of positive display rules, negative display rules, and suppression on average errors with negative display rules as the moderator</td>
<td>116</td>
</tr>
<tr>
<td>11</td>
<td>Interaction of negative display rules and negative affectivity on average errors</td>
<td>124</td>
</tr>
</tbody>
</table>
12 Interaction of positive display rules and negative affectivity on emotion-display dissonance ................................................................. 126

13 3-way interaction of positive display rules, negative display rules, and negative affectivity on grip time difference with positive affectivity as the moderator ........................................................................................................... 127

14 3-way interaction of positive display rules, negative display rules, and negative affectivity on grip time difference with negative affectivity as the moderator .................................................................................................................. 129

15 Interaction of positive display rules and negative display rules on deep acting .................................................................................................................. 138

16 Summary of the direct effects of display rules on outcomes ........................................ 164

17 Summary of the indirect effects of display rules on outcomes ................................. 166
CHAPTER I

STATEMENT OF THE PROBLEM

In recent years, organizational scholars have begun to acknowledge the importance of social and interpersonal job requirements faced by today’s workforce (Brotheridge & Grandey, 2002; Humphrey, Nahrgang, & Morgeson, 2007). The growing status of social and interpersonal dimensions of work experiences has been largely attributed to the rise in the service sector economy (MacDonald & Sirianni, 1996; Pugliesi, 1999). The expansion of the service industry has forced researchers to consider the prominent role of emotions in the workplace (Elfenbein, 2007; Lord & Kanfer, 2002). By accounting for emotions in the workplace, scholars now recognize that emotional labor, or the regulation and management of one’s emotions as part of the job, is a real and complex phenomenon present in many occupations (Arvey, Renz, & Watson, 1998; Ashforth & Humphrey, 1993; Brotheridge & Grandey, 2002; Diefendorff, Richard, & Croyle, 2006; Grandey, 2000; Hochschild, 1983; Kramer & Hess, 2002; Morris & Feldman, 1996). This realization has led to a plethora of research focused on better understanding the role of emotional labor in organizational settings.

At the core of emotional labor theory is the belief that employees must manage their emotions in order to comply with specific emotional job requirements, or organizational display rules, in order to achieve the over-arching goals of the
organization (Ashforth & Humphrey, 1993; Diefendorff & Gosserand, 2003; Diefendorff et al., 2006; Grandey, 2000). Organizational display rules are considered a major determinant of emotional labor because they are the standards that guide the appropriate display and expression of emotions on the job (Brotheridge & Grandey, 2002; Diefendorff et al., 2006; Diefendorff & Gosserand, 2003; Rafaeli & Sutton, 1987; Trougakos, Jackson, & Beal, 2011). More specifically, display rules outline which emotions should or should not be displayed on the job. Organizations communicate display rules to employees by stating them explicitly in training sessions and job descriptions or by incorporating them into the organization’s culture as implicit expectations (Diefendorff et al., 2006; Diefendorff & Gosserand, 2003; Diefendorff & Richard, 2003; Grandey, 2000; Hochschild, 1983). Demonstrating the prevalence and existence of display rules in many organizational settings, Diefendorff et al. (2006) found that display rules are considered by a large majority of employees and their supervisors to be formal, in-role, expectations as opposed to extra-role and discretionary. Thus, display rules are a salient feature of many work roles and environments.

One assumption of emotional labor theory is that display rules and employee compliance and adherence to display rules will benefit the organization by increasing organizational functioning, performance, and resources, helping to insure organizational prosperity and continuance (Diefendorff & Gosserand, 2003; Katz & Kahn, 1966; Diefendorff & Gosserand, 2003; Pugh, 2001; Tsai, 2001; Tsai & Huang, 2002). However, many emotional labor theorists contend that conforming to emotional display rules may also impair or reduce employee well-being and individual performance (e.g., Goldberg & Grandey, 2007; Hochschild, 1983; Kahn, 1993; Trougakos et al., 2011).
Therefore, emotional labor theory suggests a tradeoff between the individual and organizational outcomes of emotional labor whereby employee compliance to display rules will likely benefit the organization but may also interfere with individual employee well-being and functioning.

This assumption of emotional labor has led to an abundance of research seeking to confirm the impact of emotional display rules on employee functioning and organizational performance (Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff & Richard, 2003; Goldberg & Grandey, 2007; Grandey, 2003; Pugh, 2001; Schaubroeck & Jones, 2000; Trougakos et al., 2011; Tsai, 2001). This research confirmed that employee compliance to display rules is associated with a range of organizational benefits including: increased customer satisfaction (Matilla & Enz, 2002), customer service quality evaluations of the organization (Pugh, 2001), greater customer intentions to return and make positive remarks to friends about the organization (Tsai, 2001; Tsai & Huang, 2002), and increased customer loyalty intentions (Groth, Hennig-Thurau, & Walsh, 2009). Unfortunately, the research on the impact of display rules on employee functioning is less straightforward. Organizational display rules have been found to be associated with a variety of negative, and in some cases positive, outcomes for employees (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2002; Chau, 2007; Diefendorff & Richard, 2003; Goldberg & Grandey, 2007; Grandey, 2003; Schaubroeck & Jones, 2000; Trougakos et al., 2011; Zapf & Holz, 2006). The effects of display rules on individual outcomes is believed to be a function of the extent to which individuals must manage, change, and regulate their emotions to match the organizational display rules (Goldberg & Grandey, 2007; Grandey, 2000; Totterdell & Holman, 2003; Trougakos et al., 2011).
However, research evidence linking display rules to emotion regulation strategies is sparse, making it difficult to determine whether display rules impact employee outcomes through emotion regulation. Overall, display rule research does seem to suggest that display rules and employee compliance to display rules benefit the organization but it is unclear how display rules impact employee outcomes.

To help clarify the differential effects that display rules have on employee outcomes, many researchers have distinguished between two primary organizational display requirements: demands to express positive emotions and demands to suppress negative emotions (Austin, Dore, & O’Donovan, 2008; Best, Downey, & Jones, 1997; Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff et al., 2006; Diefendorff, Croyle, & Gosserand, 2005; Diefendorff & Richard, 2003; Kim, 2008; Montgomery, Panagopolou, de Wildt, & Meenks, 2006; Schaubroeck & Jones, 2000). Examination of this research suggests that the outcomes of display rules differ depending on the content of those display rules (Best et al., 1997; Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff & Richard, 2003; Diefendorff et al., 2005; Kim, 2008; Schaubroeck & Jones, 2000; Trougakos et al., 2011; Zapf & Holz, 2006). More specifically, most research has found that perceived emotional requirements to express positive emotions are associated with a variety of positive outcomes, (e.g., job satisfaction) whereas job demands to suppress negative emotions are associated with a host of negative outcomes (e.g., burnout) (Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff & Richard, 2003; Grandey, 2003; Kim, 2008; Trougakos et al., 2011). Although this research seems to suggest that demands to express positive emotions lead to better outcomes than demands
to suppress negative emotions, there are several shortcomings of this research that prohibit one from accepting this conclusion.

One problem with organizational display rule research is that most studies linking display rules to employee outcomes are based on correlational data, making causal inferences impossible (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Gosserand & Diefendorff, 2005; Grandey, 2003; Kim, 2008; Montgomery et al., 2006; Schaubroeck & Jones, 2000; Zapf & Holz, 2006). Although the research evidence suggests that display rules are associated with a variety of employee outcomes, one cannot claim that display rules are actually causing or interfering with employee outcomes. For instance, it could be that the causal direction is actually reversed, with burned out or dissatisfied employees being more likely to perceive requirements to suppress negative emotions.

To date, few studies have examined the impact of display rules on employee outcomes experimentally. However, there are three exceptions that will be briefly summarized. First, Goldberg and Grandey (2007) found that call center simulation participants who were instructed to comply with display rules experienced greater emotional exhaustion and committed more task errors than participants who did not have to follow display rules. Goldberg and Grandey attributed these effects to self-regulatory and attentional resource depletion. This research seems to suggest that display rules negatively impact employee functioning. However, the display rule condition included both demands to express positive emotions and to suppress negative emotions, making it difficult to determine whether both display rules requirements (e.g., express positive, suppress negative emotions) had an equal and negative impact on individual outcomes, or
if one type of display rule (e.g., suppress negative emotions) was driving the effects. Additionally, regulatory resources were not measured in Goldberg and Grandey, so it is not possible to determine if display rules deplete these resources.

Second, a recent experimental study by Hopp, Rohrmann, and Hodapp (2012) distinguished among the effects of various display rules by separately manipulating display rules to express positive emotions and display rules to suppress negative emotions, resulting in a 2x2 design. Although Hopp et al. found that various display rule conditions differentially affected employee outcomes, they only examined service quality ratings and positive affect. They did not consider well-being outcomes such as emotional exhaustion, emotional dissonance, or regulatory resources, leaving open the question of how different display rule conditions affect these outcomes. Further, they did not examine moderators or mediators of the effect of display rules on individual outcomes.

Another limitation of display rule research is that few studies have considered and examined person-based moderators of the relationship between display rules and individuals outcomes. Most display rule research has focused heavily on how situational factors (e.g., customer treatment, interaction frequency, interaction duration) interact with display rule requirements to affect individual outcomes (Brotheridge & Grandey, 2002; Goldberg & Grandey, 2007; Montgomery et al., 2006). Fewer studies have examined the combined effects of display rules and chronic individual difference variables (Schaubroeck & Jones, 2000). Thus, it is unclear whether the relationships observed between display rules and individual outcomes differ depending on chronic individual difference variables. More specifically, it could be that individuals who possess higher (or lower) levels of certain personal characteristics may experience better (or poorer)
outcomes when faced with display rules. Preliminary research on the combined effects of individual differences and display rules on individual outcomes would suggest that individual differences likely impact the display rule and individual outcome relationships (e.g., Diefendorff, Erickson, Grandey, & Dahling, 2011; Gosserand & Diefendorff, 2005; Schaubroeck & Jones, 2000). Only a limited number of chronic individual differences (e.g., emotional adaptability) have been examined with display rules. Therefore, more research on the combined effects of display rules and a broader set of chronic individual differences is needed.

Finally, display rule research has not clearly demonstrated through what mechanisms display rules impact employee outcomes. Some emotional labor theorists suggest that display rules have their effects on employee outcomes through emotion regulation strategies (Goldberg & Grandey, 2007; Grandey, 2000; Totterdell & Holman, 2003; Trougakos et al., 2011). Preliminary research, although correlational, suggests that the contents of specific display rule demands may have an impact on emotion regulation strategies (Austin, Dore, & O’Donovan, 2008; Diefendorff, Croyle, & Gosserand, 2005; Kim, 2008). Further supporting this assumption is a recent experimental study by Trougakos et al. (2011), which found that display rules to be neutral lead to poorer individual outcomes compared to display rules to be positive and that this effect was mediated by expression/suppression emotion regulation strategies. Although this study provides initial experimental support that display content may affect employee outcomes through emotion regulation, they only examined one regulation strategy. Thus, despite emerging research suggesting that display rules have their effect on individual outcomes via emotion regulation, this link has not been fully established or confirmed. Further, it is
unclear whether the content of display rules would have an effect on a broader set of regulation strategies, which in turn could affect individual outcomes.

In sum, display rule research does seem to suggest that organizational display rules interfere with employee well-being and performance. However, the current state of the literature prevents scholars from making firm conclusions regarding the precise impact of display rules on employee functioning. One problem is that most work has been cross-sectional in nature prohibiting claims that display rules have a causal impact on employee functioning. The three empirical studies (Goldberg & Grandey, 2007; Hopp et al., 2012; Trougakos et al., 2011) that have examined the outcomes of display rules are limited by the scope and nature of the research.

In an effort to advance display rule research, this study used a call center simulation. Display rule requirements to express positive emotions and not show negative emotions were experimentally manipulated to determine if these display rules directly or interactively relate to employee functioning (i.e., emotional exhaustion, task errors, emotional dissonance, and self-regulatory resources). This study also examined how various chronic individual differences including chronic emotion regulation tendencies and dispositional (positive and negative) affectivity combined with these display rules to affect the outcomes of emotional exhaustion, task performance, emotional dissonance, and self-regulatory resource depletion. As described in the next chapter, I predict that display rules to show positive emotions will have a positive effect on outcomes, demands to not show negative emotions will have a negative effect on outcomes and that these display rules will interact such that the negative effects of demands to not show negative emotions will be buffered by the presence of demands to
show positive emotions. I expect that the individual difference variables of chronic emotion regulation and positive and negative dispositional affectivity will interact with the display rule requirements to influence individual outcomes. Generally, I expect that negative affectivity and suppression tendencies will exacerbate the negative effects of demands to not show negative emotions and that positive affectivity and reappraisal tendencies will enhance the positive effects of demands to show positive emotions.

Another goal of the current study is to explore whether the content of display rules have an effect on a wide range of strategies individuals use to regulate their emotions. Additionally, this study will examine whether regulation strategies mediate the effect of various display rules on individual outcomes. To accomplish this goal, this study will assess a wide range of regulation strategies. However, due to the lack of theoretical and empirical work linking display rules to emotion regulation strategies, this study will not formally hypothesize how various display rules directly impact regulation strategies.
CHAPTER II
LITERATURE REVIEW

Emotional labor is the management of emotion as part of the work role (Hochschild, 1983). One aspect or determinant of emotional labor is organizational display rules, which refer to the emotional standards employees are expected to comply with as part of the job (Diefendorff & Gosserand, 2003; Diefendorff et al., 2006; Grandey, 2000). Because display rules have been identified as key antecedents of the emotional labor process, many scholars have become interested in the organizational and individual consequences of display rules (Diefendorff et al., 2006; Diefendorff & Richard, 2003; Grandey, 2003; Pugh, 2001; Trougakos et al., 2011). This research has found that compliance with display rules benefits the organization (e.g., Pugh, 2001; Tsai, 2001) but it is associated with a variety of positive and negative individual outcomes (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Kim, 2008; Schaubroeck & Jones, 2000). Thus, the precise impact of display rules on employee outcomes is rather complex. Understanding the effects of display rules on employee outcomes proves difficult because there are several shortcomings of this research.

First, most display rule research (for exceptions, see Goldberg & Grandey, 2007; Hopp et al., 2012; Trougakos et al., 2011) linking display rules to employee outcomes is based on correlational data which prohibits inferences of causality (Brotheridge &
Therefore, it is unclear whether display rules actually affect individual outcomes. Second, although Goldberg and Grandey (2007) did find negative effects of display rules when using an experimental design, their display rule manipulation confounded two types of emotional display rule requirements (e.g., express positive and suppress negative emotions). Thus, it is unknown whether (a) both types of display rules contributed independently and equally to individual outcomes, (b) the display rules combined in some way to impact outcomes, or (c) the results were primarily attributable to one of the two display requirements.

Another shortcoming of past display rule research is that studies have never directly empirically linked display rules to self-regulatory resource depletion, though it is often invoked (along with attentional resource depletion) as the explanatory mechanism for linking display rule effects on other outcomes (Beal, Weiss, Barros, & McDermid, 2005; Goldberg & Grandey, 2007). Goldberg and Grandey proposed that self-regulatory resource depletion (indicated by emotional exhaustion) and attentional resource depletion (indicated by errors in task performance) were the result of display rule requirements. Goldberg and Grandey’s dual-task paradigm provided evidence for the attentional resource depletion effect of display rules by showing that poorer task performance was observed when display rules were present versus when they were not present. However, Goldberg and Grandey inferred self-regulatory resource depletion from emotional exhaustion without directly measuring or assessing self-regulatory resource depletion. Therefore, it is still unclear whether display rules actually deplete self-regulatory
resources or if emotional exhaustion is a result of other display rule effects (e.g., display rules may require more monitoring thereby leading to the feeling of being ‘used up’).

As an additional shortcoming, when past display rule research has examined interactive effects, it has focused predominately on situational moderators (e.g., customer hostility, frequency of interactions; Brotheridge & Grandey, 2002; Goldberg & Grandey, 2007; Montgomery et al., 2006) with relatively few studies exploring the role of individual differences (for exceptions, see: Diefendorff et al., 2011; Gosserand & Diefendorff, 2005; Schaubroeck & Jones, 2000). Thus, it is unknown whether some individual differences make people better or less equipped to handle emotional display rules. Therefore, organizational scholars’ understanding of display rules and the outcomes of display rules are limited by the scope and nature of past research.

Finally, some emotional labor theorists propose that the extent to which display rules impact individual outcomes may be a function of the methods and strategies individuals use to align their emotional behaviors with organizational display rules (Goldberg & Grandey, 2007; Grandey, 2000; Totterdell & Holman, 2003; Trougakos et al., 2011). More specifically, emotional labor is considered by organizational scholars as a process that is initiated, in part, by the presence of organizational display rules (Grandey, 2000). In regards to this process, organizational display rules specify what emotions employees should or should not show on the job. In instances where an employee’s felt emotions are discrepant or conflict with the display rules, the employee must take actions to manage, change, or regulate his/her emotions to conform to the display rules. The methods and strategies individuals use to regulate their emotions to adhere to the display rules are believed to differently affect individual outcomes.
Research has widely supported this assumption, finding that some emotion regulation strategies are more detrimental to employee well-being than other strategies (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2002; Grandey, 2003; Judge, Woolf, & Hurst, 2009; Kim, 2008; Totterdell & Holman, 2003; Zammuner & Gali, 2002). Although, research has widely linked emotion regulation strategies to individual employee outcomes, the extent to which various organizational display rule requirements directly impact employee emotion regulation behaviors has not been firmly established.

Emerging experimental research suggests that display rule content may have an impact on employee outcomes through emotion regulation strategies (Trougakos et al., 2011). Unfortunately, this research is preliminary and incomplete, and has only examined a limited number of emotion regulation strategies and display rules (e.g., Goldberg & Grandey, 2007; Trougakos et al., 2011) therefore, it is unclear whether the content of display rules has a causal impact on employee regulation behaviors. See Figure 1 for a model of the emotional labor process, adapted from Grandey, 2000.

To address these issues and establish a clearer understanding of how display rules impact employee outcomes, the current study will extend prior research by independently manipulating the components of integrative display rules (i.e., express positive and not express negative emotions) in a fully-crossed between-subjects design, resulting in the following conditions - (a) express positive emotions, (b) do not show negative emotions, (c) express positive and not show negative emotions, and (d) no expression requirement. These manipulations will help isolate the causal impact of both aspects of integrative emotional display rules on individual emotional exhaustion, self-regulatory resource depletion, task performance, and emotional dissonance. This study will also measure and
assess chronic emotion regulation tendencies and dispositional affectivity to examine how these individual difference factors combine with display rules to affect individual outcomes. Finally, this study will measure and assess a wide range of emotion regulation strategies to explore whether display rule requirements directly affect individual emotion regulation strategies. In the following sections, I will describe how emotional job demands have been conceptualized and how this idea has evolved in emotional labor research. Additionally, I will draw on emotional labor and other related areas of research to develop a theoretical argument linking emotional display rules to employee outcomes.

<table>
<thead>
<tr>
<th>Situational Antecedents</th>
<th>Emotion Regulation Processes</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction Expectations</td>
<td>Regulation Strategies</td>
<td>Individual</td>
</tr>
<tr>
<td>• Display Rules</td>
<td>• Express genuine emotions</td>
<td>• Emotional Exhaustion</td>
</tr>
<tr>
<td>• Frequency, duration,</td>
<td>• Hide felt emotions</td>
<td>• Task Performance</td>
</tr>
<tr>
<td>variety *</td>
<td>• Fake unfelt emotions</td>
<td>• Resource Depletion</td>
</tr>
<tr>
<td>Emotional Events</td>
<td>• Deep Acting / Reappraisal</td>
<td>• Emotional Dissonance</td>
</tr>
<tr>
<td>• Positive Events *</td>
<td>• Cognitive change</td>
<td></td>
</tr>
<tr>
<td>• Negative Events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Bolded boxes pertain to the components of the emotional labor process examined in this study. *Indicates factors included in Grandey’s 2000 model that were not examined in this study.

Figure 1. Model of the emotional labor process adapted from Grandey, 2000.

**Emotional Job Demands and the Evolution of Organizational Display Rules**

Many organizational scholars have become interested in occupational display rules because such display rules are regarded as a major determinant of emotional labor (Rafaeli & Sutton, 1987). However, the concept of display rules did not originate in organizational research. One of the earliest discussions of display rules was by Ekman and Friesen (1975), who described or defined display rules as the rules guiding an
individual’s expression of emotions in everyday situations. Although display rules are often imposed upon individuals via social norms and expectations governed by the nature of a situation, Ekman and Friesen (1975) also discussed how occupational requirements were another primary source of display rule information. Shortly after Ekman and Friesen’s publication, Hochschild (1979; 1983) expanded on this idea by introducing the concept of emotion work, or the act of trying to change the degree or quality of an emotion or feeling. Hochschild further defined emotional labor as engaging in emotion work to express and feel organizationally appropriate emotions during a service interaction.

Hochschild argued that there are three characteristics of emotional labor. The first involves face-to-face or voice-to-voice interactions between an employee and another person. The second characteristic is that the purpose of employee emotional displays is to shape other people’s emotions. The third characteristic is that the emotional expressions of employees are shaped by organizational display rules. Stated differently, emotional labor requires employees to manage their emotions in a way that allows them to experience and express specific emotions as part of the work role (Grandey, 2000; Hochschild, 1983; Morris & Feldman, 1997).

In addition to display rules, Hochschild’s (1979) work on emotional labor and emotion work have included discussions of feeling rules that communicate to employees the emotions they should feel or experience on the job. However, organizational scholars have favored the concept of display rules over feeling rules as emotional job demands. Organizational scholars have advocated the use of Ekman and Friesen’s (1975) term display rules rather than feeling rules to describe emotional job demands because of the
private nature of actual feelings and the difficulty organizations and managers would likely encounter when attempting to enforce feeling rules (Ashforth & Humphrey, 1993; Rafaeli & Sutton, 1989). Organizational scholars have argued that display rules are a better term for emotional job requirements because display rules focus on outward and observable expressions of emotion, which would be easier for managers and organizations to monitor and enforce than emotional feelings or experiences. As a result of these arguments, display rules have dominated research and theoretical discussions of emotional job requirements in organizational research (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Grandey, 2000; Rafaeli & Sutton, 1987; Schaubroeck & Jones, 2000).

According to Rafaeli and Sutton (1987), organizations and managers must be able to monitor and enforce emotional job demands because these demands serve to benefit the organization. More specifically, organizational display rules and employee compliance and adherence to the display rules are presumed to enhance organizational functioning and performance by increasing customer satisfaction and intentions to return to organization for future service (e.g., Hochschild, 1983). Supporting this assumption, research has linked employee compliance with display rules to a variety of beneficial organizational outcomes such as greater customer loyalty and customer satisfaction (e.g., Groth et al., 2009; Pugh, 2001; Tsai, 2001; Tsai & Huang, 2002). Thus, organizational display rules and other emotional requirements function to ensure organizational success and survival, much like non-emotional job requirements.

Because display rules and employee compliance to these emotional requirements have the potential to benefit the organization, organizations must find ways to convey
these expectations to employees. Organizations communicate display rule expectations to employees by formally stating them in training sessions and job descriptions or by incorporating them into the organization’s culture as implicit expectations (Diefendorff & Richard, 2003; Hochschild, 1983; Rafaeli & Sutton, 1987). The existence of emotional display rules has been widely documented and described across a variety of occupations (e.g., Brotheridge & Grandey, 2002; Rafaeli & Sutton, 1987). Indeed, research by Diefendorff, Richard, and Croyle (2006) demonstrated the prevalence of display rules across occupations by finding that display rules are considered by a large majority of employees and their supervisors to be formal in-role job expectations as opposed to extra-role and discretionary. Thus, display rules are a prominent feature of many work roles and environments.

Classifying Organizational Display Rules

Although research has found that many employees and supervisors endorse emotional job demands as formal job requirements, emotional labor theory and research acknowledge that the content and specific emotional requirements of display rules are likely to vary by occupation (Diefendorff et al., 2006). Most emotional labor researchers have adopted a dimensional approach to classifying display rules and contend that occupations differ in the extent to which they require expression and suppression of positive and/or negative emotions (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Schaubroeck & Jones, 2000; Wharton & Erickson, 1993). However, most research has focused only on two of these emotional job demands – expressing positive emotions and suppressing negative emotions (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Diefendorff et al., 2006; Kim, 2008; Goldberg & Grandey, 2007;
Schaubroeck & Jones, 2000). This narrow focus on display rules to suppress negative and express positive emotions is partly attributed to organizational theorists’ near obsession with service oriented occupations which advocate “service with a smile” (e.g., Brotheridge & Grandey, 2002; Brotheridge & Lee, 2002; Hochschild, 1983; Grandey, 2003). More specifically, the emotional requirements of service oriented occupations require expressions of positive emotions and suppression of negative emotions.

Although emotional labor researchers have focused most of their attention on service-type occupational display rules, emotional labor theorists have widely acknowledged the existence of other emotional job demands. This include demands to suppress positive or any emotion for medical and emergency service occupations (e.g., Lewis, 2005; Smith, 1999; Smith & Kleinman, 1989; Taylor & Barling, 2004), business negotiators (Barry, 1999), politicians, priests, doctors, lawyers, and judges (Bolton, 2005; Mann, 1999; Rafaeli & Sutton, 1991). There are also cases with demands to express negative emotions, such as in bill collecting occupations, security, and law enforcement occupations (Sutton, 1991; Stenross & Kleinman, 1989; Tracy, 2004). Although scholars have widely discussed and described these display rules, only a limited number of studies have empirically examined these display rule requirements (e.g., Becker & Diefendorff, 2009, April; Bono & Vey, 2007; Zapf & Holz, 2006). Thus, most of what is known about the impact of emotional display rules on employee outcomes is limited to demands to suppress negative emotions and demands to express positive emotions.

In order to develop a systematic method for understanding and distinguishing occupations based on the emotional and behavioral requirements of display rules, Wharton and Erickson (1993) proposed a classification system for characterizing display
rules common to many occupations. Their classification involved three types of demands – integrative requirements (i.e., expressing and conveying positive emotions, not expressing negative emotions), masking requirements (i.e., masking, hiding, or neutralizing any emotion), and differentiating requirements (i.e., expressing or conveying negative emotions, not expressing positive emotions). As described above, integrative emotional demands are common to customer service occupations and are undoubtedly the most frequently described and examined display rules in emotional labor research (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Hochschild, 1983; Goldberg & Grandey, 2007; Schaubroeck & Jones, 2000). Emotional masking demands are required for professions where individuals must appear neutral and impartial when interacting with others to convey a sense of professionalism and objectivity (e.g., judge, therapist, doctor; Grandey, 2000; Kramer & Hess, 2002; Smith & Kleinman, 1989). Finally, differentiating emotional demands have been described as requirements for bill collecting and police interrogator occupations, where expressing negative emotions and hiding positive emotions are believed to facilitate the attainment of payment, confessions and information, and compliance (Rafaeli & Sutton, Sutton, 1991; Stenross & Kleinman, 1989; Tracy, 2004). Wharton and Erickson’s (1993) classification has provided emotional labor researchers with a guide for classifying emotional job demands or display rules as they differ by occupation.

In contrast to a dimensional approach to display rules, some emotional labor theorists have adopted a discrete emotions approach to identifying display rules, by specifying the specific emotions employees are expected to show are hide (Diefendorff & Greguras, 2009; Erickson & Ritter, 2001; Glomb & Tews, 2004).
researchers who adopt this approach have described how supermarket clerks are mandated to “smile” and “be friendly” in their customer interactions (Tolich, 1993) and how fast food workers must be cheerful, friendly, polite, in good humor, and show warmth at all times (Leidner, 1989; Romm, 1989). Police officers have been described as having display rule requirements to be poised in the face of danger and tragedy (Pogrebin & Poole, 1988), prison correction officers must be paranoid, detached, and withdrawn (Tracy, 2004), detectives must be sympathetic when interacting with victims (Stenross & Kleinman, 1989), bill collectors are expected to show anger or irritation towards most debtors (Sutton, 1991), and medical students must exhibit detached concern towards their patients (Smith & Kleinman, 1989).

Empirically, the discrete emotions approach to specifying display rules has described the positive emotional requirements in terms of happiness, contentment, concern, liking, enthusiasm, pride, and excitement (Diefendorff & Greguras, 2009; Diefendorff et al., 2006; Erickson & Ritter, 2001; Glomb & Tews, 2004). The discrete emotions approach to display rules has described negative emotional requirements in terms of anger, frustration, annoyance, anxiety, distress, boredom, helplessness, sadness, guilt, fear, shame, dislike, hatred, aggravation, and irritation (Diefendorff & Greguras, 2009; Diefendorff et al., 2006; Erikson & Ritter, 2001; Glomb & Tews, 2004). Erickson and Ritter (2001) also identified an agitated emotions component of display rules and classified the emotions of irritation, anger, and nervousness under this dimension. In an empirical examination of discrete display rule requirements, Glomb and Tews (2004) found that their fourteen discrete emotions coupled with behavioral requirements of various display rules were most parsimoniously represented by six factors involving the
requirements to express genuine positive emotions, fake positive emotions, hide positive emotions, express genuine negative emotions, fake negative emotions, and suppress negative emotions. Glomb and Tews (2004) proposed that representing display rules in terms of six factors is advantageous to researchers because of its simplicity, but suggested that the discrete approach to understanding display rules is most valuable to researchers in certain contexts.

The Consequences of Organizational Display Rules

Within the context of the emotional labor literature, research has found that organizational display rules are associated with both positive and negative consequences for employees (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Goldberg & Grandey, 2007; Kim, 2008; Schaubroeck & Jones, 2000). Although display rule research has focused heavily on the effects of integrative display rules, this research suggests that the consequences of display rules may differ depending on the content of the display rules (Best et al., 1997; Diefendorff & Richard, 2003; Brotheridge & Grandey, 2002; Kim, 2008; Schaubroeck & Jones, 2000). Most of this research has found that perceived emotional requirements to express positive emotions are associated with better outcomes including – lower levels of cynicism (Kim, 2008), greater job satisfaction, higher co-worker ratings of affective delivery (Diefendorff & Richard, 2003), feelings of professional efficacy (Kim, 2008), feelings of personal accomplishment (Brotheridge & Grandey, 2002; Zapf & Holz, 2006), and lower emotional exhaustion (Becker & Diefendorff, 2009, April; Chau, 2007). However, some display rule research has also linked these demands to negative employee outcomes including physical symptoms (Schaubroeck & Jones, 2000), emotional exhaustion, cynicism (Montgomery et al., 2006)
and emotional dissonance in an occupationaly diverse sample (Zapf & Holz, 2006). Conversely, perceived demands to suppress negative emotion have been associated with only negative outcomes. These include lower job satisfaction (Diefendorff & Richard, 2003), higher reports of psychosomatic complaints and emotional exhaustion (Chau, 2007; Montgomery et al., 2006), greater feelings of depersonalization, and lower feelings of personal accomplishment (Brotheridge & Grandey, 2002). Although this research suggests that demands to express positive emotions may lead to better outcomes than demands to suppress negative emotions, many of these studies are cross-sectional, making these causal claims weak. Further, this earlier work has treated these two display rules dimensions as independent, assuming that they do not interact to influence outcomes.

In an effort to establish a causal link between organizational display rules and employee outcomes, Goldberg and Grandey (2007) experimentally tested whether emotional display rules had a negative impact on individual outcomes. Using a call center simulation task to mimic an emotional labor situation, they randomly assigned participants to conditions where they either had display autonomy (i.e., they had no display rule requirements) or were given explicit display rule instructions (i.e., they had to express positive and suppress negative emotions) prior to the call center task.

Goldberg and Grandey found that explicit display rules resulted in more task errors (lower performance) than display rule autonomy and that display rules marginally predicted higher emotional exhaustion. They concluded that display rules directly interfere with employee functioning. Although, these results seem to suggest that display rules impair employee functioning, Goldberg and Grandey simultaneously placed two
types of emotional display rules on participants in the display rule condition – requirements to suppress negative emotion and to express positive emotion. As such, it is not possible to tell from this study whether display rules had their effects on individuals because of the positive emotional expression demand, the negative emotional suppression demand, or both. Therefore, one cannot conclude whether the negative consequences of display rules are due to the demand to suppress a negative emotion, the demand to express a positive emotion, or both. Given that some research suggests that demands to show positive emotions has benefits for employees (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003), it may be that the effects observed in Goldberg and Grandey (2007) are entirely due to demands to suppress negative emotions. Similarly, it is not possible to determine whether demands to express positive emotion actually lead to better individual outcomes.

Based on these research findings, Goldberg and Grandey (2007) concluded that display rules interfere with employee functioning by depleting attentional resources (demonstrated by lower task performance) and self-regulatory resources (demonstrated by greater emotional exhaustion). Although, Goldberg and Grandey’s dual-task paradigm provided support for an attentional resource depletion account of display rule effects, they never directly measured nor assessed self-regulatory resources. Therefore, it is impossible to conclude that display rules actually deplete self-regulatory resources.

In an effort to overcome some of the shortcomings of prior experimental display rule research, a recent study by Hopp et al., (2012) attempted to disentangle the causal effects of the different integrative display rule demands by examining the outcomes of display rule requirements to express positive emotions, suppress negative emotions,
express positive and suppress negative, and no display rule requirements. These researchers found that display rules to suppress negative emotions led to lower positive affect compared to the other three conditions. Additionally, they found that participants required to express positive emotions had significantly better service quality ratings compared to all other conditions. When participants had to suppress negative emotions in addition to expressing positive emotions, this effect disappeared. Thus, display rules to express positive emotions are linked to better service quality only if the display rules do not require employees to also suppress negative emotions. However, these authors only examined affective experience and service quality ratings, thus excluding well-being outcomes commonly examined in emotional labor research. Another shortcoming of this study is that it did not examine the potential influence of these display rule conditions on self-regulatory resource depletion. Additionally, this prior work did not examine moderators or mediators of various display rules on employee outcomes.

A final experimental study of display rules by Trougakos et al. (2011) found that participants who were assigned display rules to be emotionally neutral exhibited significantly less task persistence and greater avoidant behavior than participants who were given display rules to express positive emotions. Further, they found that this effect was mediated by the emotion regulation strategy of expression suppression. Consistent with prior experimental display rule research described above, this study demonstrates the differential effects of display rule content on individual outcomes and suggests that this effect is partly attributed to the strategies employees use to conform to display rules. However, a shortcoming of this study is they did not include a control group, making it difficult to confirm whether neutral display rules interfered with individual outcomes or
the positive display rules lead to better individual outcomes. Another shortcoming of this study is that it did not examine the combination of various display rules on individual outcomes. Finally, research has found that individuals regulate their emotions using a variety of strategies (Gross, 1998), but Trougakos et al (2011) only examined one of several acknowledged regulation strategies.

Thus, one key purpose of the current investigation is to examine how the distinct components of integrative display rules (i.e., express positive, suppress negative) independently or interactively affect individual outcomes and to test whether self-regulatory resource depletion is an outcome of display rules. Further, this study will also examine how individual difference moderators could affect the relationship of display rules on employee functioning. A final goal of this study is to measure a wide range of emotion regulation strategies and explore whether various display rules have a differential impact on regulation strategies and whether regulation strategies mediate the effects of display rules on individual outcomes. To accomplish these goals, this research will manipulate the emotional content of display rules (e.g., express positive, do not show negative emotions, or express positive and do not show negative emotions). Thus, this study will replicate and extend Goldberg and Grandey’s (2007) original research, using their call center simulation task. By using Goldberg and Grandey’s (2007) call center simulation task, and manipulating emotional display rules, this study will attempt to establish the causal effects of display rules on a broader set of individual outcomes discussed in more detail below. Further, by measuring a broader set of emotion regulation strategies, the current study explores whether display rules differentially affect individual emotion regulation strategies.
Consistent with Goldberg and Grandey (2007), I examined emotional exhaustion and task performance as dependent variables. These constructs are representative of perhaps the two most commonly examined outcomes in industrial/organizational psychology research: job performance and well-being. Additionally, they represent outcomes that can be meaningfully assessed in an experimental context. I also examined emotional dissonance because dissonance is commonly examined as an outcome of emotional labor processes (Kruml & Geddes, 2000; Zapf & Holz, 2006). Finally, in order to directly test the assumption that display rules deplete self-regulatory resources, I measured self-regulatory resources as an outcome variable. I will describe these outcomes in more detail below.

Self-Regulatory Resource Depletion

Some emotional labor theorists contend that display rules are emotional job demands that have the potential to deplete or consume employee self-regulatory resources (e.g., Goldberg & Grandey, 2007). According to this perspective, display rules require individuals to continually monitor and control their emotions, which depletes personal self-regulatory resources (e.g., Beal et al., 2005; Goldberg & Grandey, 2007). This view is consistent with a limited resource model of self-regulation whereby all acts of effortful control over one’s behavior (e.g., continually monitoring and modifying one’s emotions) draw from a common pool of resources (Baumeister, Bratslavasky, Muraven, & Tice, 1998; Muraven & Baumeister, 2000; Muraven, Tice, & Baumeister, 1998). More specifically, acts of self-regulation deplete self-regulatory resources which in turn minimize the level of self-regulatory resources available for subsequent acts of self-regulation (Moller, Deci, & Ryan, 2006; Muraven & Slessareva, 2003; Schmeichel &
Baumeister, 2004; Vohs & Heatherton, 2000). Taken together, these assumptions and empirical findings suggest that display rules are job demands that tax or deplete self-regulatory resources by requiring individuals to engage in an effortful process of monitoring emotions, comparing actual emotions with the emotional display rule standard, and then behaviorally regulating or changing emotions to match the emotional job demands (e.g., Diefendorff & Gosserand, 2003). Thus, the presence of emotional display rules creates a standard against which employees’ must continually monitor and compare their emotions and emotional behaviors.

Although some emotional labor theorists (e.g., Beal et al., 2005; Goldberg & Grandey, 2007) contend that display rules have a depleting effect on individual self-regulatory resources, no research has directly tested this assumption. Further, these theories have not discussed how the content or specific emotional requirements may differentially affect self-regulatory resource depletion. Therefore, it is unknown whether resource depletion is actually an outcome of display rules, and whether the level of self-regulatory resource depletion differs depending on the content of the display rules. In order to address these issues, this study provides a direct, non-self-report test of self-regulatory resource depletion as an outcome. This study also examines whether self-regulatory resource depletion differs depending on the content of the display rules.

*Momentary Emotional Exhaustion*

Emotional exhaustion is one of the most widely studied consequences of emotional labor (Brotheridge & Grandey, 2002; Goldberg & Grandey, 2007; Grandey, 2003; Judge, Woolf, & Hurst, 2009; Wilk & Moynihan, 2005). Emotional exhaustion is a core component of burnout and defined as “the feeling of being emotionally
overextended and exhausted by one’s work” (Maslach and Jackson, 1981, p. 101).

Emotional exhaustion can be experienced as either a sense of feeling psychologically and emotionally drained and/or by physical fatigue (Ito & Brotheridge, 2003; Wright & Cropanzano, 1998). Research has found that emotional exhaustion is associated with major work demands including – heavy workload, task complexity, role ambiguity, and role conflict (Ito & Brotheridge, 2003; Witt, Andrews, & Carlson, 2004; Wright & Hobfoll, 2004). These findings are consistent with the conservation of resources (COR) theory of stress (Wright & Hobfoll, 2004), which states that emotional exhaustion can occur “when valued resources are lost, inadequate to meet demands, or do not yield the anticipated returns” (Lee & Ashforth, 1996, p. 123). Thus, COR theory and supporting research (Wright & Hobfoll, 2004) suggests that emotional exhaustion is likely to occur when an individual’s actual or perception of personal resources are not adequate to effectively complete a task or meet a demand.

Although preliminary, emerging research has linked organizational display rules to employee emotional exhaustion (e.g., Becker & Diefendorff, 2009; Chau, 2007; Goldberg & Grandey, 2007; Montgomery et al., 2006). Display rules have been associated with higher levels of emotional exhaustion (Becker & Diefendorff, 2009; Chau, 2007; Montgomery et al., 2006). An important point to note is that emotional exhaustion is traditionally conceptualized as a long-term consequence of emotional labor (e.g., Grandey, 2000). However, experimental research suggests that emotional exhaustion can be momentary or immediate (Goldberg & Grandey, 2007). More specifically, Goldberg and Grandey (2007) found that participants who were required to follow display rules in their call center simulation experienced greater emotional
exhaustion than participants who did not have to conform to display rules after an hour-long experiment. Thus, display rules may exhibit an immediate impact on emotional exhaustion, as well as a long-term impact on emotional exhaustion. Taken together, research and theory suggests that display rules will lead to greater emotional exhaustion among participants, even if it is momentary rather than long-term. However, the extent to which an individual may feel emotional exhaustion is likely dependent on the content of the display rule. I will elaborate on this issue in more detail in the next section.

**Task Performance**

Unlike emotional exhaustion and other well-being outcomes, emotional labor research has focused much less on performance-related outcomes of emotional labor and display rules. However, emerging theory and research suggests that display rules can also impact task performance (Diefendorff & Gosserand, 2003; Goldberg & Grandey, 2007). As mentioned, display rules can be conceptualized as assigned goals or standards with which employees must comply to achieve satisfactory job performance (Diefendorff & Gosserand, 2003; Goldberg & Grandey, 2007). In order to abide by these display rule goals or standards, an employee must continually evaluate his or her current emotions and behaviors, determine whether the experienced emotions and behaviors match the display rules or standards, and when discrepancies between one’s actual emotional experiences and the display rule standards are found, the person must then make the necessary behavioral adjustments to align one’s emotional experiences and behaviors with the display rules standards (Diefendorff & Gosserand, 2003). Importantly, this continual act of monitoring, evaluating, and behavioral adjustment is believed to rely on and consume cognitive and attentional resources, which are limited (Baumeister et al.,
Having to divert one’s attention and cognitive resources to monitoring one’s emotions and behaviors may increase cognitive load leaving fewer attentional resources available to use for task performance leading to greater task errors (Diefendorff & Gosserand, 2003; Goldberg & Grandey, 2007; Kanfer & Ackerman, 1989).

Supporting the assumption that display rules have the ability to interfere with task performance by consuming attentional resources, Goldberg and Grandey (2007) found that participants who were assigned display rules had more task errors or lower task performance and accuracy compared to participants who had display autonomy or did not have to abide by display rules in a call center simulation task. Thus, display rules and the process of monitoring and regulating one’s behaviors in response to these display rules likely impair task performance by depleting attentional and cognitive resources that cannot be devoted fully to the task at hand. However, the extent to which display rules interfere with task performance is likely dependent on the content of the display rule. I will elaborate on this issue in more detail in the next section.

*Emotional Dissonance*

Complying with organizational display rules requires individuals to manage their emotions in a way that allows the individual to conform to the emotional demands of the job. However, emotional display rules or demands may become problematic when an individual’s felt emotions conflict with the emotional display rule expectations or the emotions one actually expresses (Hochschild, 1983; Kruml & Geddes, 2000; Morris & Feldman, 1996; Pugh, Groth, & Hennig-Thurau, 2011; Zapf & Holz, 2006). This inconsistency between the emotions that one must display to be compliant with display
rules and the emotions one actually experiences is referred to as emotional dissonance (Kruml & Geddes, 2000; Middleton, 1989; Morris & Feldman, 1997; Zapf, Vogt, Seifert, Mertini, & Isic, 1999). Emotional display rules may lead to emotional dissonance when the emotions an individual must express or actually does express on the job conflict with the emotional experiences of the individual. Thus, emotional dissonance is likely to occur in situations that evoke emotions that conflict with the display rule expectations, such as when one must interact with a difficult customer.

There are two conceptualizations of emotional dissonance. According to one perspective, often adopted by organizational scholars, emotional dissonance occurs when the emotions an individual feels are discrepant from the emotions one expresses (Diefendorff, Yang, & Becker, 2009, August; Kruml & Geddes, 2000; Pugh et al., 2011). The other perspective is that emotional dissonance occurs when the emotions an individual feels are discrepant from the emotions one is expected to express on the job (Hochschild, 1983; Middleton, 1989; Morris & Feldman, 1997). In an attempt to empirically distinguish between these two perspectives, Diefendorff, Yang, and Becker (2009, August) assessed the two perspectives as different constructs. More specifically, Diefendorff et al. (2009, August) conceptualized the discrepancy between felt emotions and emotional expectations as feeling-expectancy discrepancy. Diefendorff et al. retained the discrepancy between felt and expressed emotions as emotional dissonance, which has been argued as more theoretically consistent with research on cognitive dissonance (Pugh et al., 2011). Preliminary evidence suggests that these two constructs are empirically distinct from each other. This is the only known empirical study to distinguish among the two conceptualizations of emotional dissonance.
In addition to the different conceptualization of emotional dissonance, there are different views of how emotional dissonance fits into the emotional labor process. Some theorists argue that emotional dissonance is an outcome of emotion work (Ashforth & Humphrey, 1997). According to the outcome perspective, emotional dissonance is likely to occur when situations elicit emotional experiences that deviate from organizational expectations. However, emotional dissonance may represent a more proximal outcome of display rules than emotional exhaustion or task performance (Bakker & Heuven, 2006; Zapf et al., 1999). Supporting this assumption, Bakker and Heuven (2006) found that emotional demands’ effect on burnout was mediated by emotional dissonance, suggesting that emotional dissonance is an outcome of emotional job demands, but may represent a more proximal outcome of these demands.

Conversely, some emotional labor theorists contend that emotional dissonance is a component of emotion work, rather than an outcome of emotion work (Kruml & Geddes, 2000; Morris & Feldman, 1997). However, drawing from Bakker and Heuven’s findings, I will formally hypothesize that emotional dissonance is an outcome of display rules, but will explore the proximity of emotional dissonance in relation to momentary emotional exhaustion, self-regulatory resource depletion, and task performance. Additionally, I will assess emotional dissonance according to both perspectives, as discrepancy between felt and expressed emotions as well as discrepancy between felt emotions and display expectations. I will then explore whether these two conceptualizations are empirically distinct from each other and examine how they fit into the emotional labor process as hypothesized in the current study.
CHAPTER III
THE CURRENT INVESTIGATION

With the exception of one study (Hopp et al., 2012), experimental research on display rules has not independently manipulated demands to show positive emotions (positive display rules) and not show negative emotions (negative display rules), preventing the determination of the relative influence of these two display requirements on employee outcomes. In the remainder of this chapter, I will draw on theoretical and empirical evidence to hypothesize how these two display requirements independently and interactively influence self-regulatory resource depletion, emotional exhaustion, task performance, and emotional dissonance.

Table 1 depicts the 2x2 experimental design in which both the demands to express positive emotions and to not express negative emotions are independently manipulated. Box A, in which both display requirements are present, represents the integrative display rule condition used in Goldberg and Grandey (2007). Boxes B and C represent conditions in which only one of the display rules are present, do not show negative emotions (negative display rules) and show positive emotion (positive display rules). Box D corresponds to the display autonomy condition employed by Goldberg and Grandey (2007) in which no specific emotional requirements are prescribed to participants.
Table 1. Study Experimental Design

<table>
<thead>
<tr>
<th>Negative Display Rules</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>A (Integrative Display Rules)</td>
<td>B (Negative Display Rules)</td>
</tr>
<tr>
<td>Absent</td>
<td>C (Positive Display Rules)</td>
<td>D (Display Autonomy)</td>
</tr>
</tbody>
</table>

As mentioned, display rules to not show negative emotions have been consistently linked to negative outcomes including lower job satisfaction (Diefendorff & Richard, 2003), higher reports of psychosomatic complaints and emotional exhaustion (Chau, 2007; Montgomery et al., 2006), and greater feelings of depersonalization and lower feelings of personal accomplishment (Brotheridge & Grandey, 2002). Further, preliminary experimental research on display rules has found that individuals instructed to suppress negative emotions experienced significant declines in positive affect after interacting with a hostile customer, compared to participants with other display rule instructions (e.g., autonomy, express positive emotions, express positive and suppress negative emotions) (Hopp et al., 2012). Similarly, an experiment by Trougakos et al. (2011) found that individuals who were instructed to be emotionally neutral, by showing no emotion, exhibited less task persistence and greater avoidant behavior than participants instructed to express positive emotions. Thus, display rules to suppress or to not show negative emotions or any emotion have the potential to interfere with employee functioning.

In line with these findings, an abundance of experimental research outside of the emotional labor domain has found that instructions to suppress emotions are associated with a variety of cognitive (Baumeister et al., 1998; Richards & Gross, 1999, 2000),
physiological (Gross, 1998; Gross & Levenson, 1997), and social impairments (Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003; Srivastava, Tamir, McGonigal, John, & Gross, 2009), as well as self-regulatory resource depletion (Muraven et al., 1998). Furthermore, some research has found that chronic thought suppression is linked to depressive and anxious affect as well as obsessional thinking (Wegner & Zanakos, 1994). This compliments other research which has found that dealing with undesirable information using thought suppression strategies impair task performance when compared to concentration strategies, particularly when cognitive load of the task is high (Wenzlaff & Bates, 2000). Together this research suggests that suppressive behavior can interfere with individual well-being and task performance. Based on the research which has demonstrated the diverse and negative impact of demands to suppress or not show experienced emotions (Baumeister et al., 1998; Brotheridge & Grandey, 2002; Butler et al., 2003; Diefendorff & Richard, 2003; Gross, 1998, 2002; Gross & Levenson, 1997; Hopp et al., 2012; Muraven et al., 1998; Richards & Gross, 1999, 2000; Trougakos et al., 2011), I expect that the demands to not show negative emotions will increase individual self-regulatory resource depletion, emotional exhaustion, task errors, and emotional dissonance. As such, I make the following hypothesis:

*Hypothesis 1:* Negative display rules will have a main effect on outcomes, with participants assigned to the negative display rules condition exhibiting higher levels of (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance, compared to individuals not assigned to this condition.
Positive Display Rules

In addition to display rules to suppress negative emotions, display rule research has focused heavily on the outcomes associated with display rules to express positive emotions (Becker & Diefendorff, 2009, April; Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Kim, 2008). A majority of this research has linked display rule requirements to express positive emotions to better employee outcomes including lower emotional exhaustion and better performance ratings (Chau, 2007), higher professional efficacy (Kim, 2008), greater feelings of personal accomplishment (Brotheridge & Grandey, 2002), and higher job satisfaction (Diefendorff & Richard, 2003). These findings are not surprising given their resemblance to existent research, which also demonstrates the benefits of experiencing and displaying positive emotions.

First, research has linked the experience and expression of positive emotions to variety of positive work-related, social, and well-being outcomes (see Lyubomirsky, King, & Diener, 2005, for a review). Additionally, some research suggests that even if an individual is not experiencing a positive emotion, merely simulating or faking the expression of positive emotion could increase or elicit feelings of positive emotions in the simulator (e.g., Izard, 1990; Matsumoto, 1987). This is consistent with the facial feedback hypothesis whereby emotional experiences are believed to be evoked in an individual through muscle and facial movements that correspond to emotional expressions (e.g., Adelmann & Zajonc, 1989; Strack, Martin, & Strepper, 1988). More importantly, research has found that positive mood or emotion can counteract or buffer the negative effects of self-regulatory resource depletion (Tice, Baumeister, Shmeuli, & Muraven, 2007). Thus, any performance or well-being deficits incurred by having
display rule standards may be buffered or restored by the experience and expression of positive emotions inoculating employees against self-regulatory resource depletion and other negative outcomes. Taken together, this research would suggest that imposing display rule requirements to express positive emotions may actually lead to better employee outcomes than other emotional requirements. Abiding by display rules to express positive emotions may combat the effects of having display rule demands or standards by protecting employee self-regulatory resources. As such, I make the following prediction:

**Hypothesis 2:** Positive display rules will have a main effect on outcomes, with participants assigned to the positive display rules condition exhibiting lower levels of (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance compared to individuals not assigned to this condition.

**Interactive Effects of Negative and Positive Display Rules**

As mentioned, integrative display rule requirements or the demands to express positive *and* suppress negative emotions are among the most frequently reported and investigated emotional display rule requirements and are common to service-sector occupations (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Diefendorff et al., 2006; Schaubroeck & Jones, 2000). As reviewed above, many research studies have examined the effects of these two display rules separately (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Kim, 2008; Schaubroeck & Jones, 2000) but only two studies have examined the combined effects of these two display rules (Goldberg & Grandey, 2007; Hopp et al., 2012). This makes theorizing the
effects of display rules to express positive and suppress negative emotions difficult, but not impossible.

Given that display rules to express positive emotions have been widely linked to better outcomes than display rules to suppress negative emotions (Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff & Richard, 2003) and that suppressing emotions have been linked to poorer outcomes than expressing emotions (Baumeister et al., 1998), it is unlikely that the combination of these two display rules would have a more devastating impact on employee functioning than the sole requirement to suppress negative emotions. Rather, the demand to express positive emotions may combat or buffer some of the negative effects of suppressing negative emotions for several reasons. First, some research evidence shows that simulating the experience of positive emotions (i.e., smiling) can actually lead the simulator to experience more positive emotions (Izard, 1990; Matsumoto, 1987). Further, the experience and expression of positive emotions have been linked to a variety of positive individual outcomes (Lyubomirsky et al., 2005). Second, as mentioned above, the experience and expression of positive emotions has been shown to combat or restore the negative effects of self-regulatory resource depletion (Tice et al., 2007). Therefore, simulating positive emotions and experiencing positive affect as a result may help protect or restore personal resources that may become depleted by having to suppress or not show negative emotions. Further, greater availability of self-regulatory resources may prevent or protect individuals from impairments in well-being and functioning. When these findings are considered in tandem with the negative effects that have been reported with suppressing negative emotions and display rules to suppress negative emotions, one is able to see how the negative effects of demands to
suppress negative emotions could easily be weakened by simultaneously having
requirements to express positive emotions. Therefore, I expect that the presence of the
display rule requirement to express positive emotion will buffer the negative effects of
having to not show negative emotions. As such, I predict the following:

**Hypothesis 3:** Positive display rules will moderate the effect of negative display
rules on (a) self-regulatory resource depletion (b) emotional exhaustion, (c) task
errors, and (d) emotional dissonance such that the effect of negative display rules
will be weaker when positive display rules are present than when they are absent.

**The Role of Traits: Person x Situation Interaction in Emotional Labor**

Although display rules have been linked to employee well-being and performance
outcomes, through both experimental and cross-sectional research studies, few studies
have examined the combined effects of display rules and chronic individual difference
variables (Diefendorff et al., 2011; Gosserand & Diefendorff, 2005; Schaubroeck &
Jones, 2000). Rather, most display rule research has focused heavily on how situational
factors (e.g., customer treatment, interaction frequency, interaction duration) interact with
display rule requirements to affect individual outcomes (Brotheridge & Grandey, 2002;
Goldberg & Grandey, 2007; Montgomery et al., 2006). Thus, it is unclear whether the
relationships observed between various display rules and individual functioning would
differ depending on chronic individual difference variables. More specifically, it could
be that individuals who possess higher (or lower) levels of certain personal characteristics
may experience better (or poorer) outcomes when faced with display rules.

Supporting this assumption, Schaubroeck and Jones (2000) found that individuals
with low levels of emotional adaptability reported higher experiences of physical
symptoms compared to individuals with higher levels of emotional adaptability when they perceived higher levels of display rules to express positive emotions. Further, Diefendorff et al. (2011) found that group-level display rules combined with individual trait affectivity to affect emotion regulation strategies. More specifically, individuals higher in positive dispositional affectivity in work groups that had higher levels of integrative display rule perceptions reported using deep acting emotion regulation strategies to a greater extent than individuals low in positive affectivity. In contrast, Diefendorff et al. also found that individuals higher in negative affectivity in work groups that perceived higher levels of integrative display rules reported using surface acting to a greater extent than individuals low in negative affectivity.

Thus, preliminary research suggests the relationship between display rules and individual outcomes can differ or be moderated by chronic individual differences. Therefore, a second goal of the current study is to examine how various chronic individual difference variables combine with integrative display rules (e.g., express positive and do not show negative emotions) to affect individual functioning. In the following sections I will discuss how two individual difference variables – chronic emotion regulation and dispositional affectivity – combine with display rules to affect individual functioning.

**Chronic Emotion Regulation**

One individual difference that may interact with display rules to affect individual functioning is chronic emotion regulation. Chronic emotion regulation refers to the methods and strategies that individuals tend use on a regular or day-to-day basis to regulate or control their emotions (Gross & John, 2003). Demonstrating these
differences, Gross and John (2003) found that individuals differ in their propensity to regulate their emotions by suppressing their felt emotions or by reappraising their emotions. *Reapraisers* consistently use methods and strategies of modifying emotional expressive behaviors and felt emotions, whereas *suppressors* habitually regulate their emotions by suppressing or hiding the expressive behaviors associated with an emotion (Gross & John, 2003). Interestingly, Gross and John found that reappraisers tend to experience better individual outcomes than suppressors. More specifically, they found that reappraisers reported fewer depressive symptoms, greater self-esteem and life satisfaction, and greater experiences and expression of positive emotions than non-reappraisers. Conversely, suppressors tended to experience greater emotional dissonance, greater negative affect and tended to express and experience fewer positive emotions than non-suppressors.

Given that reappraisers report better individual outcomes than suppressors, I predict that the negative effects of display rules to not show negative emotions will be weaker and the positive effects of display rules to express positive emotions will be stronger for individuals who report higher levels of emotion regulation by reappraisal than individuals who report lower levels of emotion regulation by reappraisal. As such, I posit the following hypotheses:

*Hypothesis 4:* Reappraisal moderates the effect of negative display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effect of negative display rules are weaker when reappraisal is high compared to when it is low.

*Hypothesis 5:* Reappraisal moderates the effect of positive display rules on (a)
self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and
(d) emotional dissonance such that the effect of positive display rules will be
stronger when reappraisal is high compared to when it is low.

Conversely, because emotion regulation by suppression is linked to a variety of
negative outcomes, I predict that the negative effects of display rules to suppress negative
emotions will be stronger and the positive effects of display rules to express positive
emotions will be weaker for individuals who report higher levels of emotion regulation
by suppression than individuals who report lower levels of emotion regulation by
suppression. Thus I predict the following:

_Hypothesis 6:_ Suppression moderates the effect of negative display rules on (a)
self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and
(d) emotional dissonance such that the effect of negative display rules will be
stronger when suppression is high compared to when it is low.

_Hypothesis 7:_ Suppression moderates the effect of positive display rules on (a)
self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and
(d) emotional dissonance such that the effect of positive emotions display rules
will be weaker when suppression is high compared to when it is low.

Finally, consistent with the arguments presented above, I believe that the negative
effects of display rules to not show negative emotions will be buffered when combined
with display rules to express positive emotions. However, I believe that this effect may
be moderated by chronic emotion regulation. Because reappraisal is associated with a
variety of positive outcomes compared to suppression, I believe that the buffering effect
of display rules to express positive emotions on the relationship between display rules to
not show negative emotions will be stronger for individuals who report higher levels of emotion regulation by reappraisal than individuals who report lower levels of emotion regulation by reappraisal. Additionally, because suppression has been linked to a variety of poorer outcomes, I believe that the beneficial effect of positive display rules on negative display rules will be weaker for individuals who report higher levels of suppression than individuals who report lower levels of suppression. Thus, I predict the following three-way interactions:

_Hypothesis 8:_ There is a three-way interaction between reappraisal, positive display rules, and negative display rules in predicting (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. The nature of this effect is such that the effect of negative display rules will be weaker when positive display rules are present than when they are absent and when reappraisal is high compared to when it is low.

_Hypothesis 9:_ There is a three-way interaction between suppression, positive display rules, and negative display rules in predicting (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. The nature of this effect is such that the effect of negative display rules will be weaker when positive display rules are present than when they are absent and when suppression is low compared to when it is high.

Positive and Negative Affectivity

Positive and negative affectivity are two additional individual difference factors that likely interact with the display rules to affect individual outcomes. Individuals high in positive affectivity tend to have more frequent experiences and expressions of positive
emotions, such as excitement, enthusiasm, and joy than individuals low in positive affectivity (Watson, 1988). Moreover, individuals with high levels of positive affectivity tend to focus on the positive aspects of other people, themselves, and view the world in a positive manner (Watson, 1988). In contrast, individuals high in negative affectivity tend to experience unpleasant emotion, such as anxiety, fear, and anger more often than individuals low in negative affectivity and tend to view their environment as threatening and negative (Chen & Spector, 1991; Larsen & Keteleer, 1991; Robinson, Ode, Moller, & Gotez, 2007; Watson & Clark, 1984, 1997).

Given that individuals high in positive affectivity tend to experience and express positive emotions more frequently than individuals low in positive affectivity, it may be easier for these individuals to abide by display rules to not show negative emotions and abide by display rules to express positive emotion because they tend to experience negative emotions less and positive emotions more often than individuals low in positive affectivity. As such, I predict that the negative effects of display rules to not show negative emotions will be weaker for individuals with higher levels of positive affectivity than individuals with lower levels of positive affectivity. I also predict that the positive effects of display rules to express positive emotions will be stronger for individuals high in positive affectivity compared to individuals low in positive affectivity. As such I posit the following hypotheses:

Hypothesis 10: Positive affectivity moderates the effect of negative display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effect of negative display rules is weaker when positive affectivity is high compared to when it is low.
Hypothesis 11: Positive affectivity moderates the effect of positive display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effects of the positive display rules is stronger when positive affectivity is high compared to when it is low.

Conversely, given the research has found that individuals high in negative affectivity tend to experience and express greater negative emotions, these individuals may have greater difficulty abiding by display rules to suppress negative emotions and to abide by display rules to express positive emotions. This may cause these individuals to experience greater difficulty complying with these display rules than individuals low in negative affectivity. As such, I also predict that the negative effects of display rules to suppress negative emotions will be stronger for individuals with higher levels of negative affectivity than lower levels of negative affectivity. I also predict that the positive effects of display rules to express positive emotions will be weaker for individuals with higher levels of negative affectivity than lower levels of negative affectivity. As such, I make the following hypotheses:

Hypothesis 12: Negative affectivity moderates the effect of negative display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effects of the negative display rules is stronger when negative affectivity is high compared to when it is low.

Hypothesis 13: Negative affectivity moderates the effect of positive display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effects of positive display rules will be weaker when negative affectivity is high compared to when it is low.
Finally, consistent with the arguments presented above regarding the positive effects of positive display rules and the negative effects of negative display rules, I believe that the negative effects of display rules to not show negative emotions will be buffered when combined with display rules to express positive emotions. However, I believe that this effect may be moderated by dispositional affectivity. Because positive affectivity is associated with a variety of positive outcomes compared to negative affectivity, I believe that the buffering effect of display rules to express positive emotions on the relationship between display rules to not show negative emotions will be stronger for individuals who have higher levels of positive affectivity than lower levels of positive affectivity. Additionally, because negative affectivity has been linked to a variety of poorer outcomes, I believe that this effect will be weaker for individuals who have higher levels of negative affectivity than individuals with lower levels of negative affectivity.

Thus, I predict the following three-way interactions:

**Hypothesis 14:** There is a three-way interaction between positive affectivity, positive display rules, and negative display rules in predicting (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. The nature of this effect is such that the effect of negative display rules will be weaker when positive display rules are present compared to when they are absent and when positive affectivity is high compared to when it is low.

**Hypothesis 15:** There is a three-way interaction between negative affectivity, positive display rules, and negative display rules in predicting (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. The nature of this effect is such that the effect of negative display
rules will be weaker when positive display rules are present than when they are absent and when negative affectivity is low compared to when it is high.

Exploring the Effects of Display Rule Content on Emotion Regulation Strategies

As mentioned above, emotional labor is widely conceptualized as a process that is initiated by organizational display rules (Grandey, 2000; Totterdell & Holman, 2003). Organizational display rules are believed to require individuals to manage and regulate their emotional behaviors when the emotions they experience deviate from display rule expectations. Further, the strategies an employee uses to comply with those display rules are believed to directly impact individual outcomes (Grandey, 2000). Supporting this assumption, emotional labor research has widely demonstrated that some emotion regulation strategies are more detrimental to employee well-being than other strategies (Brotheridge & Lee, 2002; Judge et al., 2009; Kim, 2008; Totterdell & Holman, 2003; Zammuner & Galli, 2005). More specifically, studies have found that surface acting, or faking appropriate emotions while suppressing or hiding inappropriate emotions is associated with more negative outcomes (e.g., emotional exhaustion, depersonalization, reduced job satisfaction) compared to deep acting strategies in which the regulator actively tries to modify feelings and emotions to be congruent with the display rules (Grandey, 2003; Judge et al., 2009; Zammuner & Galli, 2005).

Although research has widely linked emotion regulation strategies and display rules to individual outcomes (e.g., Diefendorff & Richard, 2003; Goldberg & Grandey, 2007; Hopp et al., 2012; Judge et al., 2009), research linking display rules to emotion regulation is weak at best. Preliminary research, albeit largely cross-sectional, suggests that the strategies individuals use to regulate their emotions may be influenced, in part, by
the content of the display rule (Austin, Dore, & O’Donovan, 2008; Diefendorff, Croyle, & Gosserand, 2005; Kim, 2008; Trougakos et al., 2011). More specifically, cross-sectional research has found that emotional demands to suppress negative emotions are associated with greater use of surface acting regulation strategies (Austin et al., 2008; Chau, 2007; Diefendorff et al., 2005; Kim, 2008) whereas display rules to express positive emotions have been linked to lower surface acting and greater deep acting (Chau, 2007; Diefendoff et al., 2005; Kim, 2008; Montgomery et al., 2006).

Experimental research has provided some additional support for the link between display rules and emotion regulation strategies (Goldberg & Grandey, 2007; Trougakos et al, 2011). However, experimental research suggests that emotion regulation is linked to display rules as a mediator between display rules and individual outcomes. Goldberg and Grandey (2007) were the first to experimentally examine emotion regulation as a mediator between display rules and individual outcomes. Goldberg and Grandey found that explicit display rule requirements to express positive and suppress negative emotions was significantly related to greater task errors and marginally related to greater emotional exhaustion. However, they only found partial mediating effects for the emotion regulation strategy of surface acting on emotion exhaustion and found no emotion regulation mediating effects for task errors. Another, more recent experimental study of display rules found that display rules to be neutral led to significantly less persistence and greater avoidant behaviors compared to display rules to express positive emotions (Trougakos et al., 2011). Importantly, this study found that these effects were mediated by the emotion regulation strategy of expression suppression.
Taken together, preliminary research evidence suggests that the content of display rule may directly impact employee emotion regulation strategies, which in turn, may affect employee outcomes (Goldberg & Grandey, 2007; Trougakos et al., 2011). Unfortunately, most research linking display rules to emotion regulation is correlational and has only examined a narrow set of regulation strategies – surface acting, deep acting, and expression suppression (Austin, Dore, & O’Donovan, 2008; Diefendorff, Croyle, & Gosserand, 2005; Goldberg & Grandey, 2007; Kim, 2008; Trougakos et al., 2011). This limits the ability to make specific hypotheses regarding the impact of display rule content on a broad set of emotion regulation strategies. Therefore, in an effort to examine the emotional labor process in more detail, the current study assesses a wide range of more precise emotion regulation strategies to explore how the content of display rules might affect emotion regulation strategies. More specifically, the current study examines regulation strategies of suppressing or hiding emotions, faking emotions, changing one’s felt emotions to match display rules, changing how one thinks about this situation, and expressing genuine felt emotions. These analyses will be purely exploratory, as many emotion regulation strategies have not been examined as they relate to display rules.

**Summary**

In sum, I believe that the effects of display rules on individual self-regulatory resource depletion, emotional exhaustion, task errors, and emotional dissonance will differ depending on the content of the display rule. More specifically, I believe that display rules to not show negative emotions will lead to the highest level of emotional exhaustion, task errors, emotional dissonance, and resource depletion compared to all other display rules conditions, including display autonomy. Conversely, I believe that
display rules to express positive emotions will lead to better outcomes compared to all other display rule conditions. Together, I believe that display rules to express positive emotions will buffer the negative effects of display rules to not show negative emotions on outcomes.

Secondly, the current study examines how individual difference variables chronic emotion regulation and dispositional affectivity combine with the display rule requirements to influence individual functioning. I believe that the negative effects of display rules pertaining to the demand to not show negative emotions will be stronger for individuals who tend to regulate their emotions using suppression and for individuals with higher levels of negative affectivity. Conversely, I believe that the relationship between display rules to not show negative emotion and individual outcomes will be weaker for individuals who tend to regulate their emotions using reappraisal strategies and for individuals with higher levels of positive affectivity. I believe that the effect of display rules to express positive emotions on outcomes will be better for individuals who tend to regulate their emotions using reappraisal strategies and for individuals with higher levels of positive affectivity compared to individuals with low levels of these traits, for individuals who tend to regulate their emotions using suppression, and for individuals with high levels of negative affectivity. Additionally, I believe that the buffering effect of display rules to express positive emotions on the effect of display rules to not show negative emotions on outcomes will be moderated by chronic emotion regulation and trait affectivity in the form of three-way interactions.

Finally, in line with model of the emotional labor process (e.g., Grandey, 2000; Totterdell & Holman, 2003) I believe that display rules may have their effects on
individual outcomes by possibly affecting the strategies individuals use to regulate their emotions. There is little research to guide this assumption, however, the current study assesses emotion regulation strategies and explores whether this assumption holds true.
CHAPTER IV

METHOD

The current study used an adapted version of Goldberg and Grandey’s (2007) experimental simulation of an incoming call center. Goldberg and Grandey’s call center task was designed to simulate an occupational setting that requires employees to engage in emotional labor. This call center task uses voice-to-voice encounters rather than face-to-face encounters to minimize confounds related to “customer” or research assistant appearance and behaviors. As mentioned by Goldberg and Grandey, voice-to-voice encounters allow the “laboratory study to seem more realistic to the participants than interacting with confederates face-to-face” (p. 305). Further, research has found that employees who interact with their customers primarily through voice-to-voice encounters have similar perceptions and expectations of emotional labor requirements as employees’ who interact with their customers primarily through face-to-face encounters (Kinman, 2009). Thus, this call center simulation is appropriate for testing emotional labor theory.

Participants

A total of 152 participants were randomly recruited from undergraduate psychology classes at a large Midwestern university to participate in this study. In exchange for participating in the one hour experiment, participants received course extra credit and were entered into a random prize drawing for a chance to win a gift certificate
to an online store. Of all participants, 94% (143/152) passed the manipulation check, by accurately identifying the emotional requirements associated with their assigned display rule condition (see below for description of the manipulation check). The nine participants that did not pass the manipulation check indicated that they were instructed to comply with additional display rule requirements that were not part of their display rule condition or indicated that they were instructed to do things that were not part of any display rule condition (e.g., write a short story about yourself). As a result, these nine individuals were removed from further consideration, resulting in 35 participants in the control condition, 36 participants in the positive display rule condition, 35 participants in the negative display rule condition, and 37 participants in the integrative display rule condition.

Of the 143 participants that passed the manipulation check, 78% of the sample was female. The average age of participants was 23 years, and 80% were Caucasian, 16% were African American, 1% were Asian American, 2% were Hispanic, and 1% marked other. Participants worked an average of 19 hours per week and were at their current jobs for an average of 19 months. In the total sample, 24% worked in the service industry (e.g., sales associate, clerk, cashier, server, telemarketer), 47% were employed in non-service occupations and 29% were unemployed or did not specify type of employment. Of the individuals who were currently employed in a service occupation, 26% reported working in customer service or call center/telemarketing positions. Seventy-nine percent of the sample indicated that they had prior work experience in a service occupation.
Procedure

Except for a few minor changes, the experiment was designed and executed as close to Goldberg and Grandey’s (2007) experimental design as possible. At the start of the experimental session, each participant was asked to complete an informed consent and then a baseline measure of handgrip stamina (i.e., a measure of regulatory resources; Tice et al., 2007). Participants were told that this handgrip stamina task was being used as a pretest for a future study. After completing this task, participants were asked to complete a questionnaire assessing demographic information and individual differences (see below). Participants were then randomly assigned to one of four display rule conditions.

Each participant completed the study individually and the experiment took place in two different rooms. In the first room, participants completed questionnaires, received one-on-one training from me and also completed the call center simulation in this room. During the training, participants were seated at a call center work station with the primary researcher in the room with a chair and desk with several items to assist with the call center task, including a head-set attachment hooked up to the computer, a calculator, writing utensils, a sales catalog, and a stack of order forms. Research assistants acted as confederates and made “customer calls” (three per participant) using Skype communication software from a computer in a second room located down the hall from the participant experiment room.

Immediately after the call center simulation, I entered the room and gave participants additional questionnaires to fill out. Participants were also asked to repeat the hand grip task and told that the handgrip measure is more accurate when the average
of two trials is used. The hand grip task was actually the self-regulatory resource depletion measure. After the hand grip stamina task, participants were asked to complete post study measures of difficulty, effort, fatigue, and mood. Participants were then debriefed after completing all measures.

*Training*

The author of this study individually trained each participant for this study. The training session was designed to mimic Goldberg and Grandey’s (2007) training. Participants were told that researchers have designed a call center simulation for an office supply company in order to study call center jobs and the effects of using a new communication software technology known as Skype. During training, the participants were shown the resources they needed to use as part of the call center simulation: the retail catalog of products the customer could order during calls, the product order form that needed to be filled out for each customer, and a generic script for processing sales calls. During training, the trainer reviewed the script and clarified the process for placing an order, using the order form, and calculating correct tax and shipping fees (See Appendix A for training script). After reviewing the instructions with participants, the trainer asked participants if they had any questions and then let the participant reflect on the materials for approximately one minute.

After answering questions and letting the participant reflect on the materials, the trainer informed the participant that call center performance would be evaluated by certain criteria. All participants were told: “Remember the purpose of the study is to evaluate how accurately, or correctly, you can do the tasks. This means your thoroughness and attention to detail while you record all information.” At this point in
the experiment, the instructions diverged from those used by Goldberg and Grandey (2007) in that the display rule manipulation was different (see below). In accordance with past research (e.g., Goldberg & Grandey, 2007; Gosserand & Diefendorff, 2005), all participants were given the following information to ensure commitment to the call center task: “If you do not meet these expectations, then you will be taken off the phones and repeat training. This is consistent with consequences of poor performance in organizations. However, if you meet these requirements, you will receive a special bonus. Think of this as earning a bonus for your job performance.” The special bonus was obtaining an additional entry into the random gift card prize drawing, supposedly increasing their chances of having their name randomly pulled in the drawing. However, unbeknownst to participants, all participants received an additional entry ticket for participation thus all participants had equally favorable odds at having their name drawn in the prize drawing. Participants were then asked to read the first few lines of the script to ensure that the display rules were understood. At the end of the training session, the trainer instructed the participant on how to work the phone headset, use the Skype communication software, and answer any questions the participant had before leaving the room. Participants were also asked to fill out a brief questionnaire attached to each order form and to complete this questionnaire before answering the next incoming call.

Call Center Simulation

Participants and confederate customer callers used computer software, Skype, to communicate with each other. Skype is a free video and voice conferencing software that enables individuals to engage in live voice-to-voice communication while also having the option to have face-to-face contact with each other if internet web cameras are employed.
with the program. However, for the purpose of the current study and to minimize any confounds attributed to research assistant appearance, only voice conferencing was used and no video recording was used. Participants and confederates communicated using headsets.

Participants received the first call only a few moments after the trainer left the simulation room. Participants did not know how many calls they were going to receive during the call center simulation and were instructed to keep answering incoming calls and placing catalog orders until the research administrator stopped them. For each participant, three different male undergraduate research assistants acted as three different customers. Consistent with past experimental research (e.g., Hopp et al., 2012) and to make compliance with display rules more challenging, all callers were difficult or rude. The first caller was difficult because he had an out-of-date catalogue and acted as though the participant was asking senseless questions during the call (See Appendix B for script). The second caller was difficult because he complained about an item not being in stock and about shipping and product costs (See Appendix C for script). The third caller was difficult because he was upset about being on hold for a long time and because the company did not accept the customer’s first choice method of payment (See Appendix D for script). Further, all callers were males, which is consistent with Goldberg and Grandey (2007) who always had the difficult caller be male. To ensure realism and consistency across participants, research assistants memorized and practiced their scripts and were blind to experimental conditions.

It is not uncommon to use negative or difficult customers in call center simulation experiments (Goldberg & Grandey, 2007; Hopp et al., 2012; Rupp & Spencer, 2006;
Spencer & Rupp, 2009). Difficult callers are often used in these laboratory studies because experimental and field research has found that customer hostility increases the difficulty of complying with display rules, because difficult callers often evoke emotions that are inconsistent with display rule requirements (e.g., Grandey, Dickter, & Sin, 2004; Rupp & Spencer, 2006; Totterdell & Holman, 2003). In these experimental studies, participants interact with one to three callers. Typically, the effects of difficult customers in face-to-face interactions are more pronounced than the effects of difficult customers in voice-to-voice interactions. More specifically, Hopp et al. (2012) found effects after participants had one face-to-face interaction with a difficult customer, as did Spencer and Rupp (2009). Conversely, Goldberg and Grandey found limited support for many of their hypotheses when participants had one difficult customer interaction out of a total of three caller interactions in voice-to-voice encounters. Goldberg and Grandey concluded that they did not find many effects of customer hostility because the manipulation may not have been strong enough to elicit effects or that the effects of interacting with a difficult customer were short-lived because only the second caller was always difficult. Therefore, to strengthen the experimental manipulation, participants interacted with three callers and all three callers were difficult. Examining the effects of display rules in the context of difficult customer interactions will also provide help determining how specific display rules operate in a difficult customer context.

For each of the three calls, the “customer” requested two items with the quantity of each item ranging from one to four. The participant needed to refer to the sales catalog to complete the sales order form by filling out product and cost information. During the call center simulation, participants were able to refer to a script (See Appendix E for
participant script) to help them acquire the necessary information to complete the sales order form and were instructed to directly ask the customer for billing and shipping addresses. Confederate callers used a script so as to deliver the same verbal content and emotional tone to each participant. The three different customer interaction scripts were consistently applied to each participant. Confederate callers also rated the participant’s demeanor after completing the call with the participant as a way to assess the extent to which the participant appeared to be complying with the display rules. Once an order was complete, participants were to place the caller on hold, compute the total sales order bill with a calculator (including tax and shipping costs), and then take the customer off hold and finalize the order. During the call center task and after completing each sales order form, participants were instructed to complete the brief survey attached to each sales order form. After the call center task, the experiment administrator entered the simulation room, collected the order forms, provided additional surveys, and had the participants complete the hand grip strength task again. After completing the surveys all participants were debriefed.

Display Rule Manipulations

Display rules were communicated and manipulated as part of the instructions provided by the administrator at the end of the training session. Participants were randomly assigned to one of four possible display rule conditions. Toward the end of the training and after hearing that accuracy is important for the task, participants received display rule instructions. All display rule instructions were adapted from Goldberg and Grandey’s (2007) display rule manipulations. In accordance with the 2x2 between subjects design, participants were placed in one of four display rule conditions.
Participants in the *positive display rule* condition were instructed to express positive emotions (See Appendix F). For the pilot study, these instructions included no mention of suppression of negative emotions. However, some participants indicated that they were instructed to not show negative emotions in addition to being instructed to express positive emotions during the training. Therefore, the instructions were revised for the focal study to include a statement that participants would not be evaluated on their ability to not show negative emotions. Participants in the *negative display rule* condition were instructed to not show negative emotions (See Appendix G). For the pilot study, these instructions included no mention of expressing positive emotions. However, all participants in this condition indicated that they were instructed to express positive emotions in addition to not showing negative emotions during the pilot study. Therefore, the instructions were revised for the focal study to include a statement that participants would not be evaluated on their ability to express positive emotions. Participants in the *integrative display rule* condition were instructed to express positive emotion and to not show negative emotions to callers (See Appendix H). For the *no display rule* condition, participants were instructed to not be concerned with how they interact or act with customers (See Appendix I). No changes were made to the *integrative display rule* or *no display rule* condition based on the results from the pilot study.

**Pre-Experimental Measures**

Prior to the start of the experiment, several measures of the variables of interest were administered to each participant. In total, the pre-experimental measures took approximately five minute to complete. These measures are described below.
Control and Demographic Questionnaires

Prior to the experiment and as part of the informed consent procedure, all participants were asked to consent to releasing their University GPA, high school GPA, SAT and ACT scores to the primary researcher. This information was used to control for differences in performance attributable to cognitive ability. Participants had the option to decline release of their academic information, and all participants were ensured that the information would remain confidential.

Because participants may have different orientations or attitudes towards providing service to customers that may affect their behaviors towards callers and perceptions of display rules, I controlled for participants’ service orientation using Gwinner, Bitner, Brown, and Kumar’s (2005) service orientation scale. This five item measure assesses the extent to which people have a genuine desire to meet customer needs. The current study instructed participants to rate the extent to which they agreed with each item using a 7-point Likert-type scale (1=strongly disagree to 7=strongly agree). A sample item is “I enjoy helping others.” The internal consistency reliability for this scale was α = .77. See Appendix M for all items.

Participants were also asked to complete a survey of demographic information prior to the experiment assessing gender, age, ethnicity, information related to jobs and occupations (e.g., tenure, job title), academic major, year in school (See Appendix J). Gender and age were also used as control variables in the analyses.

Chronic Emotion Regulation

Chronic emotion regulation was assessed using Gross and John’s (2003) ten-item emotion regulation questionnaire. Participants were instructed to rate their agreement
with each item using a 7-point Likert-type scale (1=strongly disagree to 7=strongly agree). There are six items that measured participant’s tendency to regulate emotions by reappraisal (sample item “I control my emotions by changing the way I think about the situation I’m in”) and four items that measured participant’s tendency to regulate emotions by suppression (sample item “I control my emotions by not expressing them”). The internal consistency reliability for the reappraisal items was \( \alpha = .80 \) and \( \alpha = .81 \) for the suppression items. All items are listed in Appendix K.

**Positive and Negative Affectivity**

The current study assessed positive and negative affectivity using Watson, Clark, and Tellegen’s (1988) 20-item Positive and Negative Affectivity Schedule (PANAS; Watson et al., 1988). The PANAS consists of 10 positive (e.g., enthusiastic) and 10 negative affect description words (e.g., upset). Participants were asked to indicate the extent to which they felt each affective word “in general” using a 5-point Likert-type scale (1 = very slightly or not at all to 5 = extremely). The internal consistency reliability for positive scale items was \( \alpha = .83 \) and \( \alpha = .83 \) for the negative scale items. See Appendix L for all items.

**Experimental Measures**

During the call center simulation, each participant completed several brief questionnaires. These questionnaires were attached to the sales order forms and were to be completed at the end of each call. These measures are described in more detail below.

**Emotion Regulation Strategies**

According to some emotional labor theorists, (Diefendorff et al., 2005; Grandey, 2000) employees use a variety of strategies to regulate their emotions in order to comply
with display rule requirements. Additionally, researchers suggest that the strategies employees use to regulate their emotions may mediate the effect of display rules on outcomes (Grandey, 2000). Some of the most widely acknowledged and discussed emotion regulation strategies include - suppressing or hiding emotions, faking emotions, changing one’s felt emotions to match display rules, changing how one thinks about this situation, and expressing genuine felt emotions (Diefendorff et al., 2005; Grandey, 2000, 2003; Mikolajczak, Tran, Brotheridge, & Gross, 2009; Totterdell & Holman, 2003). To test this idea and to assess the strategies participants used to comply with display rule requirements during customer interactions, I adapted items from established measures (e.g., Brotheridge & Grandey, 2002; Brotheridge & Lee, 2003; Diefendorff et al., 2003; Grandey, 2003) assessing these five categories of emotion regulation strategies. The five strategies I measured included - suppressing or hiding emotions, faking emotions, changing one’s felt emotions to match display rules, changing how one thinks about this situation, and expressing genuine felt emotions. For each regulation strategy and after each call, participants were asked to indicate the extent to which they engaged in each behavior during the call by indicating their agreement on a 5-point scale (1 = strongly disagree to 5 = strongly agree). All emotion regulation items are listed in Appendix N.

The extent to which participants’ regulated their emotions with suppression was assessed with two items adapted from several established measures that specifically pertain to holding back feeling or emotions (Brotheridge & Lee, 2003; Grandey, Dickter, & Sin, 2004; Totterdell & Holman, 2003). A sample suppression item is, “hid my true feelings.” The items demonstrated an internal consistency reliability of $\alpha = .94$. The extent to which participants’ regulated their emotions by faking unfelt emotions was
assessed with two items adapted from several established measures that assess faking or simulating unfelt emotions (Grandey, 2003; Totterdell & Holman, 2003). A sample item includes, “faked my feelings.” The items demonstrated acceptable internal consistency reliability of $\alpha = .91$. The extent to which participants’ regulated their emotions by deep acting, or actively trying to modify their feelings and emotions to be congruent with organizational display rules, was assessed with two items adapted from Brotheridge and Grandey’s (2002) deep acting scale. A sample item includes, “tried to actually experience the emotions that I had to show.” The items demonstrated acceptable internal consistency reliability of $\alpha = .90$. The extent to which participants’ regulated their emotions by expressing genuinely or naturally felt emotions was assessed with two items adapted from Diefendorff, Croyle, and Gosserand (2005). A sample item includes, “showed what I actually felt.” These items demonstrated an internal consistency reliability of $\alpha = .85$. Finally, the extent to which participants regulated their emotions through cognitive change efforts was assessed with two items adapted from Diefendorff, Richard, and Yang (2008). A sample item includes, “reinterpreted the situation in a more positive light.” The items had low internal consistency reliability of $\alpha = .52$.

To empirically distinguish the five emotion regulation strategies measured in this study, I conducted multilevel confirmatory factor analysis (CFA; Dyer, Hanges, & Hall, 2005; Muthén, 1994) using Mplus 6.1 (Muthén & Muthén, 1998 – 2010) with the three assessments of the strategies (one for each trial) nested within individuals. The following indicators of model fit were examined, including (a) the $\chi^2$ Goodness of Fit statistics, (b) the Tucker Lewis Index (TLI), (c) the root mean square error of approximation (RMSEA), (d) the standardized root mean square residual (SRMR) and (e) the
Comparative Fit Index (CFI). The lower bound of the good fit for the TLI and CFI indices is considered to be .90. For the RMSEA and the SRMR, the upper bounds for a good fit are considered to be .08 and .10 (Vandenberg & Lance, 2000).

The fit of the proposed factor structure (Model A: 5-factor model) was compared against the fit of several more parsimonious models (Model B - F). Emotional labor theory and research (e.g., Diefendorff & Richard, 2003; Grandey, 2000, 2003) have widely examined the emotion regulation strategy referred to as surface acting which corresponds to both suppressing felt emotion and faking unfelt emotion. Drawing on this theory and research, a four factor model (Model B) combining suppress felt emotion and fake unfelt emotions regulation strategies into one factor was tested. I also examined an alternative four factor model (Model C) which combined deep acting and cognitive change regulation strategies into one factor because theoretical discussions of emotion regulation (Grandey, 2000; Gross, 1998) suggests that these are both antecedent-focused strategies that are used to control emotional responses prior to the actual elicitation of any emotion. Consistent with emotion regulation theory and research (Grandey, 2000; Gross, 1998) which posits that emotion regulation can occur prior to the generation of emotion (antecedent-focused strategies) or after the generation of emotion (response-focused strategies) a three factor model (Model D) was examined combining suppression of felt emotions and faking unfelt emotions (response-focused strategies) and combining deep acting and cognitive change (antecedent-focused strategies). A two-factor model (Model E) was also examined combining suppression of felt emotions and faking unfelt emotions and combining deep acting, cognitive change, and natural emotions. Finally, a one-factor model (Model F) was also examined but this model was unable to converge. Because the
models were nested their fit could be directly compared using the $\chi^2$ difference test. The fit indices and chi-square difference test are displayed in Table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta$df</th>
<th>$\Delta\chi^2$</th>
<th>RMSEA</th>
<th>SRMR (within)</th>
<th>SRMR (between)</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 5 Factor</td>
<td>108.07*</td>
<td>50</td>
<td>--</td>
<td>--</td>
<td>.05</td>
<td>.05</td>
<td>.06</td>
<td>.92</td>
<td>.96</td>
</tr>
<tr>
<td>B. 4 Factor</td>
<td>130.16*</td>
<td>58</td>
<td>8</td>
<td>22.09*</td>
<td>.05</td>
<td>.06</td>
<td>.06</td>
<td>.92</td>
<td>.95</td>
</tr>
<tr>
<td>(Combine Suppress Felt E and Fake Unfelt E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. 4 Factor</td>
<td>205.64*</td>
<td>58</td>
<td>8</td>
<td>97.57*</td>
<td>.08</td>
<td>.09</td>
<td>.11</td>
<td>.83</td>
<td>.89</td>
</tr>
<tr>
<td>(Combine Deep Act and Cognitive Change)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. 3 Factor</td>
<td>226.17*</td>
<td>64</td>
<td>14</td>
<td>118.10*</td>
<td>.08</td>
<td>.09</td>
<td>.11</td>
<td>.83</td>
<td>.88</td>
</tr>
<tr>
<td>(Combine Suppress Felt E and Fake Unfelt E; Deep Act and Cognitive Change)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. 2 Factor</td>
<td>361.72*</td>
<td>68</td>
<td>18</td>
<td>253.65*</td>
<td>.10</td>
<td>.20</td>
<td>.18</td>
<td>.70</td>
<td>.78</td>
</tr>
<tr>
<td>(Combine Suppress Felt E and Fake Unfelt E; Deep Act, Cognitive Change and Natural E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. 1 Factor</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. * Significant at $p < .05$. RMSEA = Root mean square error of approximation; SRMR = Standardized root mean squared residual; TLI = Tucker-Lewis index; CFI = Comparative fit index. E = Emotion. Model B-F is compared to Model A in the chi square significance test.

A comparison of these six models indicated that Model A fit the data significantly better than all other models. Although, this five factor model fit the data well, examination of the item factor loadings revealed that the cognitive change item “During this call, I considered how things could be worse” had a poor item loading on the
cognitive change factor (.29 within; .29 between). This is not surprising given the poor reliability of the cognitive change scale (α = .52). Therefore, I decided to drop this item from further analyses, leaving only one cognitive change item “During this call, I reinterpreted the situation in a more positive light.” Based on theoretical discussions of emotion regulation theory and research which suggest that cognitive change and deep acting emotion regulation strategies are forms of antecedent-focused strategies of emotion regulation, I explored whether this cognitive change item could be combined with the deep acting items to create an antecedent-focused emotion regulation scale (e.g., Grandey, 2000; Gross, 1998). This cognitive change item had significant positive correlations with the deep acting item “During this call, I made an effort to actually feel the emotions that I needed to display” (r = .50, p < .01) and the deep acting item “During this call, I tried to actually experience the emotions that I had to show” (r = .57, p < .01).

Further, the new three item antecedent-focused emotion regulation strategy scale exhibited acceptable internal consistency reliability (α = .84). Therefore, I decided to explore the factor structure and compare alternative models of this four factor scale. The comparison models were based on the comparison models outlined above.

The fit of the proposed factor structure (Model A: 4-factor model) which consisted of factors – suppress felt emotion, fake unfelt emotion, antecedent-focused strategy (2 deep acting items combined with 1 cognitive change item), and naturally felt emotion was compared against the fit of several more parsimonious models factor model (Model B - E). A four factor model (Model B) which combined suppress felt emotion and fake unfelt emotions regulation strategies into one factor was tested. I also examined an alternative three factor model (Model C) which combined the antecedent-focused strategy
and natural emotion into one factor. A two-factor model (Model D) was also examined combining suppression of felt emotions and faking unfelt emotions and combining antecedent-focused and natural emotions. Finally, a one-factor model (Model E) was also examined. Because the models were nested their fit could be directly compared using the $\chi^2$ difference test. The fit indices and chi-square difference test are displayed in Table 3.

Table 3. Summary of Fit Statistics for Emotional Regulation Strategies – 9 items (Dropping Cognitive Change Item #2)

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta$df</th>
<th>$\Delta\chi^2$</th>
<th>RMSEA (within)</th>
<th>SRMR (within)</th>
<th>SRMR (between)</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 4 Factor</td>
<td>96.45*</td>
<td>42</td>
<td>--</td>
<td>--</td>
<td>.06</td>
<td>.07</td>
<td>.07</td>
<td>.92</td>
<td>.95</td>
</tr>
<tr>
<td>B. 3 Factor (Combine</td>
<td>119.47*</td>
<td>48</td>
<td>6</td>
<td>23.02*</td>
<td>.06</td>
<td>.07</td>
<td>.07</td>
<td>.91</td>
<td>.94</td>
</tr>
<tr>
<td>Suppress Felt E and Fake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfelt E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. 3 Factor (Combine</td>
<td>298.61*</td>
<td>48</td>
<td>6</td>
<td>202.16*</td>
<td>.11</td>
<td>.18</td>
<td>.18</td>
<td>.67</td>
<td>.78</td>
</tr>
<tr>
<td>Ant &amp; Natural E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. 2 Factor (Combine</td>
<td>309.46*</td>
<td>52</td>
<td>10</td>
<td>213.01*</td>
<td>.11</td>
<td>.19</td>
<td>.18</td>
<td>.69</td>
<td>.78</td>
</tr>
<tr>
<td>Suppress Felt E &amp; Fake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfelt E; Ant &amp; Natural E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. 1 Factor</td>
<td>632.91*</td>
<td>54</td>
<td>12</td>
<td>536.46*</td>
<td>.16</td>
<td>.26</td>
<td>.12</td>
<td>.33</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note. * Significant at $p < .05$. RMSEA = Root mean square error of approximation; SRMR = Standardized root mean squared residual; TLI = Tucker-Lewis index; CFI=Comparative fit index. E = Emotion. Ant= Antecedent (Deep Act item 1, Deep Act item 2, Cognitive change item 1). Model B-F is compared to Model A in the chi square significance test.

As shown in Table 3, Model A fit the data significantly better than all the alternative models. However, I decided to examine the item loadings of the factors. Examination of the item loadings, revealed that in Model A, the cognitive change item had a low item loading on the antecedent-focused factor (.06within; -.03between). Therefore,
I decided to drop the cognitive change items and explore the factor structure and compare alternative models of a four factor scale without the cognitive change items. The comparison models were based on the comparison models outlined above.

The fit of the proposed factor structure (Model A: 4-factor model) which consisted of factors – suppress felt emotion, fake unfelt emotion, deep acting, and naturally felt emotion was compared against the fit of several more parsimonious models factor model (Model B - E). A three factor model (Model B), which combined suppress felt emotion and fake unfelt emotions regulation strategies into one factor was tested. I also examined an alternative three factor model (Model C) which combined the deep acting and natural emotion into one factor. However, this model failed to converge when tested. A two-factor model (Model D) was also examined combining suppression of felt emotions and faking unfelt emotions and combining deep acting and natural emotions. Finally, a one-factor model (Model E) was also examined. Because the models were nested their fit could be directly compared using the $\chi^2$ difference test.

The fit indices and chi-square difference test are displayed in Table 4. As shown in Table 4, Model A fit the data significantly better than all the alternative models (Models B – E). Therefore, I decided to only examine four emotion regulation strategies in my exploratory analyses – suppress felt emotions, fake unfelt emotions, deep act, and natural felt emotions. Based on the poor item loadings and low reliability of the cognitive change items, I decided to drop the cognitive change scale from further analyses. The exploratory analyses described in the next chapter were conducted with cognitive change, however, none of these analyses revealed significant effects with cognitive change, providing additional support for excluding cognitive change from
further analyses. Therefore, no results for cognitive change are reported because this regulation strategy was not linked to any of the other variables examined in this study.

Table 4. Summary of Fit Statistics for Emotional Regulation Strategies – 8 items (Cognitive Change Items Excluded)

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta$df</th>
<th>$\Delta\chi^2$</th>
<th>RMSEA (within)</th>
<th>SRMR (between)</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 4 Factor</td>
<td>66.09*</td>
<td>28</td>
<td>--</td>
<td>--</td>
<td>.06</td>
<td>.06</td>
<td>.93</td>
<td>.97</td>
</tr>
<tr>
<td>B. 3 Factor (Combine Suppress Felt E and Fake Unfelt E)</td>
<td>89.56*</td>
<td>34</td>
<td>6</td>
<td>23.47*</td>
<td>.06</td>
<td>.06</td>
<td>.92</td>
<td>.95</td>
</tr>
<tr>
<td>C. 3 Factor (Combine Deep Act &amp; Natural E)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>D. 2 Factor (Combine Suppress Felt E &amp; Fake Unfelt E; Deep Act &amp; Natural E)</td>
<td>287.61*</td>
<td>38</td>
<td>10</td>
<td>221.52*</td>
<td>.13</td>
<td>.21</td>
<td>.68</td>
<td>.78</td>
</tr>
<tr>
<td>E. 1 Factor</td>
<td>425.19*</td>
<td>40</td>
<td>12</td>
<td>359.10*</td>
<td>.15</td>
<td>.33</td>
<td>.20</td>
<td>.53</td>
</tr>
</tbody>
</table>

*Significant at $p < .05$. RMSEA = Root mean square error of approximation; SRMR = Standardized root mean squared residual; TLI = Tucker-Lewis index; CFI = Comparative fit index. E = Emotion. Model B-F is compared to Model A in the chi square significance test.

**Emotional Dissonance**

Emotional dissonance has been conceptualized by scholars in two different ways. According to one perspective, emotional dissonance is the discrepancy between felt emotions and emotional expectations outlined by display rules (Hochschild, 1983; Middleton, 1989; Morris & Feldman, 1997), or what has been referred to as emotion-rule dissonance (Diefendorff et al., 2009, August; Holman et al., 2008). The other perspective is that emotional dissonance is the discrepancy between felt emotions and expressed emotions (Kruml & Geddes, 2000; Pugh et al., 2011), or what has been labeled emotion-
display dissonance (Diefendorff et al., 2009, August). Therefore, the current study assessed emotional dissonance according to both perspectives. As part of the emotional dissonance measures, participants were instructed to “please answer the following items concerning the call center simulation you just completed” and to indicate the extent to which they agreed with each item using a 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree).

Emotion-rule dissonance was assessed using two items adapted from Diefendorff, Yang, and Becker (2009, August). A sample emotion-rule dissonance item from Diefendorff et al., (2009, August) is “During this call I felt emotions that disagreed with what I was supposed to show in the role.” The items demonstrated acceptable internal consistency reliability of $\alpha = .89$ (see Appendix O for items). Emotion-display dissonance was assessed with two items adapted from Zapf, Vogt, Seifert, Mertini, and Isic’s (1999) emotional dissonance scale. A sample emotion-display dissonance item is: “During this call I expressed an emotion that was different from what I felt.” The items demonstrated acceptable internal consistency reliability of $\alpha = .96$ (see Appendix O for items).

To explore whether these two conceptualizations of emotional-dissonance were empirically distinct, a principal axis factoring analysis with varimax rotation was performed on the four items. This analysis provided strong support that the four items were best represented as one factor. First, use of the Kaiser criterion indicated one factor with an eigenvalue of 3.30 accounting for a cumulative 77.08% of the variance. The next factor only had an Eigenvalue of .43. Examination of the scree plot also indicated the presence of one factor. All four items had acceptable loadings on the factors ranging
from .79 to .92 (Tabachnick & Fidell, 2007). All four items also demonstrated acceptable internal consistency reliability $\alpha = .93$.

Although the results of the exploratory factor analysis suggested these four items are best represented as one factor, theoretical discussions (Diefendorff et al., 2009, August; Hochschild, 1983; Holman et al., 2008; Kruml & Geddes, 2000; Middleton, 1989; Morris & Feldman, 1997; Pugh et al., 2011) of these two dissonance constructs suggest that two factors may be more appropriate. To test the two-factor model, I conducted multilevel confirmatory factor analysis in Mplus 6.1 (Muthén & Muthén, 1998 – 2010). The fit of the proposed factor structure (Model A: 2-factor model) was compared against the fit of the one factor model (Model B: 1-factor). The following indicators of model fit were examined, including (a) the $\chi^2$ Goodness of Fit statistics, (b) the Tucker Lewis Index (TLI), (c) the root mean square error of approximation (RMSEA), (d) the standardized root mean square residual (SRMR) and (e) the Comparative Fit Index (CFI). Additionally, because the models were nested their fit could be directly compared using the $\chi^2$ difference test. The fit indices and chi-square difference test are displayed in Table 5. Both models exhibited acceptable fit with the data, and Model A was not a significantly better fit than Model B. Although the factor analysis suggested that emotion-display and emotion-rule dissonance should be treated as one construct, theoretical discussions on the topic have recommended that these two constructs be treated separately (Diefendorff et al., 2009, August; Holman et al., 2008). Thus, I tested my hypotheses three ways by treating emotion-rule and emotion-display dissonance as distinct and also testing them as one combined overall emotional dissonance construct.
Table 5. Summary of Fit Statistics for Emotional Dissonance

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta df$</th>
<th>$\Delta \chi^2$</th>
<th>RMSEA</th>
<th>SRMR (within)</th>
<th>SRMR (between)</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 2 Factor</td>
<td>.68</td>
<td>2</td>
<td>--</td>
<td>--</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
<td>1.02</td>
<td>1.00</td>
</tr>
<tr>
<td>B. 1 Factor</td>
<td>1.58</td>
<td>4</td>
<td>2</td>
<td>.91</td>
<td>.00</td>
<td>.01</td>
<td>.02</td>
<td>1.01</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. * Significant at $p < .05$. RMSEA = Root mean square error of approximation; SRMR = Standardized root mean squared residual; TLI = Tucker-Lewis index; CFI = Comparative fit index. Model B is compared to Model A in the chi square significance test.

Experienced Emotions During Calls

In order to assess the emotions that participants experienced in response to completing the call center task, this study used an adapted shortened version of the shortened 20 item job related affective well-being scale (JAWS) (Van Katwyk, Fox, Spector, & Kelloway, 2000). The shortened version of the scale consists of 20 emotions divided by activation or arousal level of the emotion (high vs. low activation) and valence of the emotion (positive vs. negative emotion), which create four categories, each consisting of five emotions. The four categories include – (1) high positive, high activation, (2) high positive, low activation, (3) low positive, high activation, and (4) low positive, low activation. Further, the high positive scales can be combined to represent positive emotions dimension and the low positive scales can be combined to represent negative emotions dimension. Because the shortened version of the JAWS is still rather long to respond to in the context of the one-hour experiment, I selected two emotions from each of the four categories that I thought participants might easily experience during the call center task. The high positive, high activation items I chose were excited and enthusiastic ($\alpha = 83$). The high positive, low activation items I chose were calm and satisfied ($\alpha = .75$). The low positive, high activation items I chose were anger and anxiety ($\alpha = .35$). The low positive, low activation items I chose were depressed and bored ($\alpha = .47$). After each call participants were asked to indicate the extent to which
they felt each emotion during the call by indicating their agreement on a 5-point scale (1 = strongly disagree to 5 = strongly agree). As listed, the two positive emotion scales exhibited acceptable internal consistency reliability. However, the two negative emotion scales exhibited poor internal consistency reliability. The combined positive emotion scale exhibited acceptable internal consistency reliability (α = .78), but the combined negative emotion scale exhibited poor internal consistency reliability (α = .49). Taken together, the results of the negative emotion scale should be interpreted with caution.

Task Performance

Participant task accuracy was assessed by evaluating the completed order forms of each participant. All participants were asked to process the same information, given the use of standardized confederate scripts (e.g., shipping time, shipping addresses, billing addresses, item numbers, page numbers). As part of the experimental task, all participants had to complete a sales order form for each caller (See Appendix P). For the performance task participants not only had to gather and record the appropriate information from participants but they also had to devote time and attention to calculating shipping costs and taxes for product orders. After the simulation, a research assistant blind to the experimental conditions of all participants scored each order form for errors against three correct order form “answer keys.” The research assistant scoring the order forms was trained by the researcher on how to accurately and consistently score the order forms. As such, several types of errors could occur, including (but not limited to) misspelling a customer’s name, writing an incorrect address, incorrectly calculating sales tax, recording the wrong payment method, recording the wrong product, recording the wrong number of products. As in Goldberg and Grandey’s (2007) experiment, an error in
one aspect of the order was not counted as an error in another aspect of the order. For example, if a participant incorrectly calculated the sales tax but correctly computed the sales total, one error was recorded even though the final sales total did not match the sales total on the scoring key.

To ensure rating accuracy, another rater, also trained by the researcher on how to accurately and consistently score the order forms, re-scored approximately 25 percent of the order forms (36 participants, 9 participants per each condition). As an index of interrater reliability of the raters, I calculated the intraclass correlation coefficient (ICC) from a one-way random effects ANOVA model using the Bartko (1976) formula. James (1982) and other researchers (Bliese, 2000) have agreed that the ICC can be interpreted as an index of interrater reliability which is the extent to which raters are suitable. Further, other studies of emotional labor have used ICC as a measure of inter-rater reliability (Buckner & Mahoney, 2012). The results revealed high interrater reliability for all rating forms (ICC = .93) and high interrater reliability across each of the three callers (ICCcaller1 = .91; ICCcaller2 = 1.00; ICCcaller3 = 1.00). Thus, both raters were consistent in scoring the order forms.

Post-Experimental Measures

After the call center simulation was completed, each participant completed several measures. In total, these measures took approximately five minute to complete. These measures are described in more detail below.

Momentary Emotional Exhaustion

Momentary emotional exhaustion was assessed using six of the seven items adapted from Erickson and Ritter’s (2001) emotional exhaustion scale. The item “I dread
getting up in the morning and having to face another day on the job” was not used because it did not fit the call center simulation context. Participants were instructed to “please answer the following items concerning the call center simulation you just completed” and indicate the extent to which they agreed with each item using a 7-point Likert-type scale (1=strongly disagree to 7=strongly agree). A sample item is “I feel used up right now.” The items demonstrated acceptable internal consistency reliability of α =.94 (See Appendix Q for items).

Self-Regulatory Resource Depletion

Participant’s self-regulatory resource depletion was assessed by measuring hand grip stamina, or the length of time participants spent, in seconds, continuously squeezing a handgrip. Self-regulatory resources are consumed by tasks or actions that require self-control or intentional self-directed altering, monitoring, overriding, or restraining one’s behavior, responses, or urges (Baumeister, Schmeichel, & Vohs, 2007). Self-regulation is a limited resource, such that engaging in a single act of self-control or self-regulation impairs subsequent attempts to self-regulate (See Muraven & Baumeister, 2000 for a review). A variety of behaviors have been found to require self-regulation including – controlling thoughts, overcoming unwanted impulses, fixing attention, guiding behavior, and making choices (See Baumeister, Vohs, & Tice, 2007 for a review). Hand grip stamina is a widely used measure of self-regulatory resource depletion because squeezing a hand grip requires a great deal of effort to overcome physical discomfort and fatigue required to maintain a grip on the device (Hamilton, Vohs, Sellier, & Meyvis, 2011; Muraven et al., 1998; Tice et al., 2007; Vohs, Baumeister, & Ciarocco, 2005). If one stops exerting effort, even for a moment, one’s grip will loosen. Research has established
that maintaining a grip is almost entirely a measure of self-control and has little to do with overall body strength (Rethlingshafer, 1942; Thornton, 1939). Research has found that performance on a hand grip task is worse after completing a resource depleting task (Hamilton et al., 2011; Muraven et al., 1998; Tice et al., 2007; Vohs et al., 2005). Therefore, self-regulatory resource depletion is demonstrated by less persistence on the hand grip task after completing the initial call center simulation (compared to persistence prior to completing the call center simulation).

Consistent with prior studies using this methodology, the hand grip apparatus was a commercially available hand exerciser that consists of two handles and a metal spring (Hamilton et al., 2011; Muraven et al., 1998; Tice et al., 2007; Vohs et al., 2005). The researcher timed how long each participant was able to maintain a grip on the hand grip. As in previous studies, to provide a clear objective signal to stop timing and determine when participants stopped exerting a continuous amount of pressure on the hand grip, a small wad of paper was inserted between the handles, so that when the grip was relaxed, the wad of paper would fall to the ground (Tice et al., 2007; Vohs et al., 2005). Performance on a hand grip task may vary as a function of hand strength, therefore I measured hand grip performance prior to the call center task and immediately after the call center task to control for between-subjects variations in strength. The baseline measure of the hand grip task was administered at the beginning of the experiment, prior to initial surveys, and another measure was obtained immediately after participants completed the call center simulation, before completing final surveys of manipulation checks. Participants were told that the hand grip task was part of a pre-test for a future study and that they needed to complete the hand grip a second time because the measure
is more accurate when the average of two trials is used. To control for differences in hand grip strength, the baseline measure of the hand grip stamina was used as a covariate in predicting self-regulatory resource depletion.

Post-Experimental Manipulation Checks

In order to determine the extent to which participants understood and complied with emotional display rules, participants completed several manipulation checks. These manipulation checks are described below.

Self-Rated Display Rule Perceptions

At the end of the call center training, participants were given specific instructions about how they were supposed to interact with the customers, in terms of their emotional demeanor (display rule manipulation) and were told that they would be evaluated on their ability to comply with these instructions. In addition to display rules requirement instructions, all participants were told they would be evaluated on their ability to accurately complete the sales order form. In order to determine whether participants perceived the appropriate type of emotional display rules for their condition, at the end of the call center task they were asked, “At the end of your call center training, what were you specifically told by the researchers you were going to be evaluated on during these calls?” and asked to check all of the items that apply (See Appendix R for the manipulation check items and conditions that were supposed to be check with items).

Regardless of condition, all participants were to check the item about correctly completing the sales order form (participants in the control condition were only supposed to check this item). Participants in the positive display rule condition were also supposed to check the item about being friendly and expressing positive emotions. Participants in
the negative display rule condition were supposed to check the item about not showing negative emotions. Participants in the integrative display rule condition were to check all three items, including to accurately complete the sales order form item. Three of the six items were distracter items and participants were not supposed to check these items.

*Self-Rated Regulation of Discrete Emotions*

In order to determine the extent to which participants felt they had to express and/or suppress certain emotions during the call center simulation, I asked participants whether they had to express emotions as part of the task. If participants answered yes, they were then asked to list the specific emotions they expressed during the call center task. Participants were also asked whether they felt they had to suppress emotions as part of the task. If participants answered yes to this question, they were asked to list the specific emotions they suppressed during the call center task.

*Alternative Explanations of Self-Regulatory Resource Depletion Measures*

Consistent with prior studies of self-regulatory resource depletion (Baumeister et al., 1998; Converse & DeShon, 2009), I collected additional information to rule out any alternative explanations for any self-regulatory resource depletion effects found in the current study. These measures are described in more detail below.

*Mood State*

Consistent with many self-regulatory resource depletion studies, I assessed participant’s mood after completing the self-regulatory task to rule out mood-related explanations (Baumeister et al., 1998; Converse & DeShon, 2009; Moller et al., 2006; Vohs & Heatherton, 2000). This study assessed mood using Mayer and Gaschke’s (1988) 16-item Brief Mood Inspection Scale (BMIS). The BMIS consists of 16 mood-
adjective words. Participants were asked to respond by indicating the extent to which they felt each mood-item using a 4-point Likert-type scale (1 = definitely do not feel to 4 = definitely feel). Mayer and Gaschke (1988) identified two subscales of the BMIS pleasant-unpleasant (α = .86) and arousal-calm (α = .63). A sample pleasant-unpleasant adjective is “happy.” A sample arousal-calm adjective is “active” (see Appendix S for items).

**Effort, Difficulty, Fatigue**

Consistent with prior studies of self-regulatory resource depletion which have measured effort, difficulty, and fatigue (Converse & DeShon, 2009) in order to rule out these factors as causes of any differences in self-regulatory performance, this study assessed effort, difficulty, and fatigue experienced during the two experimental tasks (call center task and post experimental handgrip task) to ensure that any differences on the persistence measure are not attributable to these factors. These measures consisted of three items, adapted from Converse and DeShon (2009), each related to the level of effort (“I exerted a lot of effort during the tasks for this experiment”; α = .89), difficulty (“The tasks were tough”; α = .87), and fatigue (“I felt fatigued after the tasks”; α = .87) experienced during the tasks in this experiment. Participants rated the extent to which they agreed with each item using a 7-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). All of these items for effort, fatigue, and difficulty measures are listed in Appendix T.

**Confederate Ratings of Caller Demeanor**

In order to determine the extent to which participants appeared to be following the display rule requirements, each confederate caller rated the demeanor of his participant
using a 7-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). Five items assessed the extent to which the participant expressed positive emotions (e.g., enthusiasm, warmth, friendliness, happiness, and overall positive emotion; α = .97) and five items assessed the extent to which the participant expressed negative emotions during the call (e.g., boredom, irritation, anger, frustration, and disappointment; α = .90). A sample positive item is “This participant expressed enthusiasm” and a sample negative item is “This participant expressed irritation.” See Appendix U for all items.

To explore whether these items were best represented as two factors, a principal axis analysis with varimax rotation was performed on the ten items. This analysis provided strong support that the ten items were best represented as two factors. First, use of the Kaiser criterion indicated two factors. The first factor has an eigenvalue of 7.20 and accounted for 47.31% of the variance. The second factor had an Eigenvalue of 1.09 and accounted for 31.93% of the variance. Together, both factors accounted for 79.24% of the variance. Examination of the scree plot also indicated the presence of two factors. The five positive emotion items all had high loadings on the first factor (.86 to .94) and the five negative emotion items all had high loadings on the second factor (.45 to .88) (Tabachnick & Fidell, 2007). Further, the negative emotion items all had negative loadings on the first factor. Thus, preliminary evidence suggests that the 10 items that were meant to assess participant demeanor were best represented by two factors – positive and negative demeanor.

As a more stringent test of the confederate ratings representing two factors, I conducted confirmatory factor analysis in Mplus 6.1 (Muthén & Muthén, 1998 – 2010). The fit of the proposed factor structure (Model A: 2-factor model) was compared against
the fit of the one factor model (Model B: 1-factor). The fit indices and chi-square difference test are displayed in the top of Table 6.

As shown in Table 6, Model A fit the data significantly better than Model B, however, the two-factor model did not fit the data well exhibiting inflated within SRMR and low TLI and CFI indexes. Therefore, sources of misfit were examined by looking at the item loadings of the factors. Examination of the item factor loading revealed that the item loading for the friendly factor exhibited a poor within factor loading (.147), therefore this item was removed and the two and one factor models we re-run. As shown in the bottom of Table 6, the two factor model fit the data well and was a significantly better fit than the one factor model, providing support that the confederate ratings of participant demeanor items consisted of two factors – a positive (4 items) and negative (5 items) emotion scale.

Table 6. Summary of Fit Statistics for Confederate Ratings of Caller Demeanor

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \Delta )df</th>
<th>( \Delta \chi^2 )</th>
<th>RMSEA (within)</th>
<th>SRMR (between)</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. 2 Factor</td>
<td>330.91*</td>
<td>68</td>
<td>--</td>
<td>--</td>
<td>.10</td>
<td>.11</td>
<td>.06</td>
<td>.86</td>
</tr>
<tr>
<td>B. 1 Factor</td>
<td>1351.52*</td>
<td>80</td>
<td>12</td>
<td>1020.61*</td>
<td>.20</td>
<td>.25</td>
<td>.46</td>
<td>.43</td>
</tr>
<tr>
<td>9 Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. 2 Factor</td>
<td>221.97*</td>
<td>52</td>
<td>--</td>
<td>--</td>
<td>.09</td>
<td>.09</td>
<td>.04</td>
<td>.90</td>
</tr>
<tr>
<td>B. 1 Factor</td>
<td>1236.84*</td>
<td>64</td>
<td>12</td>
<td>905.93*</td>
<td>.21</td>
<td>.27</td>
<td>.51</td>
<td>.46</td>
</tr>
</tbody>
</table>

Note. * Significant at \( p < .05 \). RMSEA = Root mean square error of approximation; SRMR = Standardized root mean squared residual; TLI = Tucker-Lewis index; CFI=Comparative fit index. Model B is compared to Model A in the chi square significance test.
CHAPTER V

RESULTS

For this study, the means, standard deviations, and bivariate correlations for the study variables are presented in Table 7. Significant correlations are flagged in the table.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Positive DR</td>
<td>.51</td>
<td>(.50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Negative DR</td>
<td>.50</td>
<td>(.50)</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Suppress Felt Emo ER</td>
<td>3.27</td>
<td>(1.01)</td>
<td>.12</td>
<td>.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fake Unfelt Emo ER</td>
<td>3.23</td>
<td>(1.10)</td>
<td>.08</td>
<td>.15^</td>
<td>.78**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Deep Acting ER</td>
<td>2.67</td>
<td>(.89)</td>
<td>.15^</td>
<td>.03</td>
<td>.09</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Exp Natural Emo ER</td>
<td>3.06</td>
<td>(.97)</td>
<td>.07</td>
<td>-.14^</td>
<td>-.61**</td>
<td>-.66**</td>
<td>.21**</td>
<td></td>
</tr>
<tr>
<td>7. Grip Time 2</td>
<td>29.76</td>
<td>(29.31)</td>
<td>.03</td>
<td>-.23**</td>
<td>-.17^</td>
<td>.04</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>8. Grip Time difference</td>
<td>-1.60</td>
<td>(18.88)</td>
<td>.06</td>
<td>-.12</td>
<td>-.05</td>
<td>.13</td>
<td>.07</td>
<td>.26**</td>
</tr>
<tr>
<td>9. Emotional Exhaustion</td>
<td>2.85</td>
<td>(1.53)</td>
<td>.06</td>
<td>-.02</td>
<td>.37**</td>
<td>.30**</td>
<td>.04</td>
<td>-.27**</td>
</tr>
<tr>
<td>10. Task Errors</td>
<td>3.24</td>
<td>(2.51)</td>
<td>.15^</td>
<td>.00</td>
<td>.13</td>
<td>.02</td>
<td>-.19^</td>
<td>-.08</td>
</tr>
<tr>
<td>11. Emotion-Display Diss</td>
<td>3.15</td>
<td>(1.19)</td>
<td>.16^</td>
<td>.06</td>
<td>.67**</td>
<td>.81**</td>
<td>.04</td>
<td>-.66**</td>
</tr>
<tr>
<td>12. Emotion-Rule Diss</td>
<td>3.15</td>
<td>(1.05)</td>
<td>.17^</td>
<td>.02</td>
<td>.59**</td>
<td>.68**</td>
<td>.02</td>
<td>-.57**</td>
</tr>
<tr>
<td>13. Emotional Diss</td>
<td>3.15</td>
<td>(1.06)</td>
<td>.18^</td>
<td>.05</td>
<td>.67**</td>
<td>.79**</td>
<td>.03</td>
<td>-.64**</td>
</tr>
<tr>
<td>14. Reappraisal</td>
<td>5.48</td>
<td>(.83)</td>
<td>-.02</td>
<td>.19^</td>
<td>.04</td>
<td>.03</td>
<td>.30**</td>
<td>.12</td>
</tr>
<tr>
<td>15. Suppression</td>
<td>3.40</td>
<td>(1.33)</td>
<td>.01</td>
<td>.03</td>
<td>-.06</td>
<td>-.06</td>
<td>.08</td>
<td>.10</td>
</tr>
<tr>
<td>16. Positive Affectivity</td>
<td>3.74</td>
<td>(.60)</td>
<td>-.07</td>
<td>-.01</td>
<td>-.09</td>
<td>-.07</td>
<td>.03</td>
<td>.11</td>
</tr>
<tr>
<td>17. Negative Affectivity</td>
<td>1.83</td>
<td>(.60)</td>
<td>.02</td>
<td>.02</td>
<td>.18^</td>
<td>.14</td>
<td>.10</td>
<td>-.02</td>
</tr>
</tbody>
</table>

Note. DR = Display Rules, Emo = Emotions, Exp = Express, ER = Emotion Regulation, Diss = Dissonance. SD = Standard Deviation. \( n = 136 – 143 \). *p < .10, *p < .05, **p < .01.
Table 7. Means, Standard Deviations, and Intercorrelations of Main Study Variables (Continued)

<table>
<thead>
<tr>
<th></th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Emotional</td>
<td>-.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaustion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Task Errors</td>
<td>-.13</td>
<td>.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Emotion-</td>
<td>.00</td>
<td>.37**</td>
<td>.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>display Diss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Emotion-</td>
<td>-.04</td>
<td>.37**</td>
<td>.09</td>
<td>.79**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rule Diss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Emotional</td>
<td>-.02</td>
<td>.39**</td>
<td>.06</td>
<td>.95**</td>
<td>.94**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Reappraisal</td>
<td>.04</td>
<td>-.21*</td>
<td>-.14</td>
<td>.02</td>
<td>-.09</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Suppression</td>
<td>.15^</td>
<td>-.15^</td>
<td>-.01</td>
<td>-.12</td>
<td>-.01</td>
<td>.07</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Positive</td>
<td>-.05</td>
<td>-.09</td>
<td>.03</td>
<td>-.07</td>
<td>-.08</td>
<td>-.08</td>
<td>.12</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Affectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Negative</td>
<td>.02</td>
<td>.33**</td>
<td>-.03</td>
<td>.15^</td>
<td>.09</td>
<td>.13</td>
<td>-.15^</td>
<td>.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Affectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. DR = Display Rules, Emo = Emotions, ER = Emotion Regulation, Diss=Dissonance. SD = Standard Deviation. Emotional dissonance was created by combining emotion-display dissonance and emotion-rule dissonance. n = 143. * p < .10, * p < .05, ** p < .01.

Manipulation Checks: Confederate Ratings of Participant Demeanor

In order to examine the extent to which participants complied with display rule requirements in their actual expression of positive and negative emotions, each of the three confederate research assistant callers rated each participant on their positive and negative emotional demeanor during the call. A one-way ANOVA revealed a significant effect for condition on expression of positive emotion $F(1, 139) = 3.89, p < .01$, partial eta$^2 = .08$. Tukey’s HSD test showed that participants in the positive ($M = 4.95$) and integrative ($M = 4.91$) display rule conditions were rated by confederate research assistant callers as expressing significantly more positive emotions than participants in the no display rule condition ($M = 4.26$). Participants in the negative display rule condition ($M = 4.53$) were not rated significantly different from any of the other conditions on confederate ratings of participant’s positive demeanor. A one-way ANOVA revealed a significant effect for condition on the expression of negative emotion $F(1, 139) = 3.92, p < .01$, partial eta$^2 = .08$. Tukey’s HSD test showed that participants
in the positive ($M = 2.11$) and integrative ($M = 2.15$) display rule conditions were rated by confederate research assistant callers as expressing significantly fewer negative emotions than participants in the control condition ($M = 2.71$). Participants in the negative display rule condition ($M = 2.40$) did not significantly differ in their rated expression of negative emotions from the other conditions. Thus, there is some evidence to suggest that participants were complying with their display rule requirements.

Number of Callers

Due to technical issues related to the voice communication computer software and internet service during the experiment, seven participants were unable to complete a third call. Of the seven participants, two were in the control condition, two were in the positive display rule condition, two were in the negative display rule condition, and one participant was in the integrative condition. To determine whether the number of callers (i.e., 2 versus 3) affected the results of this study, all analyses were conducted with and without the seven participants that only completed two calls. Because the majority of results did not differ for the full sample compared to the sample that excluded the 2-call participants, I report analyses for the full sample. In the one instance for which the number of calls made a difference, I report results both with and without the 2-caller participants below.

Main Hypothesis Testing: Hypotheses 1 - 3

Hypotheses 1a-d, 2a-d, and 3a-d were tested by running 2 (positive display rules: absent, present) x 2 (negative display rules: absent, present) between subjects ANCOVAs with emotional exhaustion, average task errors, self-regulatory resource depletion, and emotional dissonance as the dependent variables. Service orientation, age, and gender
were entered as covariates when testing Hypotheses 1 - 3. Hypothesis 1a-d proposed that the presence of negative display rule requirements would lead to (a) higher self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. Hypotheses 2a-d was that the presence of positive display rule requirements would lead to lower (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. Hypotheses 3a-d was that positive display rules would moderate the effect of negative display rules on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance such that the effect of negative display rules would be weaker when positive display rules were present than when they were absent. The means, standard deviations, and results of the ANCOVAs are summarized in Table 8.

Self-Regulatory Resource Depletion

Hypotheses 1 – 3(a) were tested two ways by conducting a 2 (positive display rules: absent, present) x 2 (negative display rules: absent, present) between subjects factor ANCOVA with hand grip task persistence as the dependent variable. Consistent with prior studies using persistence on a handgrip task as a measure of self-regulatory resource depletion, persistence was assessed two ways – first, as grip time 2 controlling for grip time 1, and second, as a difference score between grip time 1 and grip time 2 which was calculated by subtracting each participant’s pre-experimental handgrip duration time from his or her post-experimental handgrip duration (Muraven et al., 1998; Tice et al., 2007; Vohs et al., 2005).
Table 8. Analysis of Covariance (ANCOVA) Results for Display Rules and Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Presence of DR</th>
<th>Positive DR (M) (SD)</th>
<th>Negative DR (M) (SD)</th>
<th>PosDR</th>
<th>NegDR</th>
<th>PosDR X Neg DR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Regulation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grip Time 2 (sec.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>28.92 (28.38)</td>
<td>31.48 (33.84)</td>
<td>0.42</td>
<td>1.55</td>
<td>0.53</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>30.60 (30.56)</td>
<td>28.05 (24.32)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grip Time Diff (sec.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>-2.67 (18.31)</td>
<td>0.55 (20.39)</td>
<td>0.45</td>
<td>1.54</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>-0.56 (19.49)</td>
<td>-3.74 (17.12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emotional Exhaustion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>2.76 (1.44)</td>
<td>2.87 (1.49)</td>
<td>1.15</td>
<td>0.19</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>2.93 (1.61)</td>
<td>2.82 (1.57)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average Errors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>2.74 (2.42)</td>
<td>3.08 (2.51)</td>
<td>3.10(^\d)</td>
<td>0.14</td>
<td>2.51</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>3.51 (2.48)</td>
<td>3.14 (2.45)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emotional Dissonance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emo-Display Diss</td>
<td></td>
<td></td>
<td></td>
<td>7.87**</td>
<td>0.48</td>
<td>0.00</td>
</tr>
<tr>
<td>Absent</td>
<td>2.95 (1.12)</td>
<td>3.08 (1.16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>3.34 (1.23)</td>
<td>3.23 (1.22)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emo-Rule Diss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>2.97 (9.1)</td>
<td>3.13 (.97)</td>
<td>6.48**</td>
<td>0.04</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>3.33 (1.14)</td>
<td>3.17 (1.12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Diss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>2.96 (.95)</td>
<td>3.10 (.98)</td>
<td>6.85**</td>
<td>0.10</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>3.33 (1.13)</td>
<td>3.20 (1.13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. DR = Display Rules, Emo = Emotion, Diss = Dissonance, PosDR = Positive Display Rules, NegDR = Negative Display Rules, Diff = Difference. \(F(1, 136)\). Standard deviations are reported in parentheses. All analyses controlled for gender, service orientation, and age. Grip time 1 was controlled when grip time 2 was the outcome. Cumulative GPA was included as a control variable when errors were outcomes. \(^{\d}p < .10, ^{\d}p < .05, ^{**}p < .01.\)

Across all conditions, participants had an average pre-experimental grip time of 31.37 seconds and a post-experimental grip time of 29.76 seconds with a difference of -1.61 seconds. The correlation between the pre- and post-experimental grip time was strong and positive \((r = .82, p < .01)\) suggesting that individuals who persisted longer on the pre-experimental hang grip task also tended to persist longer on the task after the experiment. Neither persistence assessed as grip time 2 nor as grip time difference (Time 2 minus Time 1) exhibited significant correlations with any of the alternative explanatory measures of self-regulatory resources – mood, fatigue, effort, or difficulty (see
supplemental analysis section below for analyses ruling out these factors as an explanation for results). To my knowledge, only one prior study has reported means of pre- and post-experimental grip times (Muraven et al., 1998). In this study, Muraven and colleagues (1998, Study 2) found that across all three of their experimental conditions, participants had a pre-experimental grip time of 69.85 seconds and post-experimental grip time of 54.8 seconds with the difference between pre- and post-experimental grips times of -15.05 seconds.

The results of the analysis using grip time 2 with grip time 1 as a covariate provided no support for Hypothesis 1a $[F(1, 134) = 1.55, p = .22, \text{partial eta}^2 = .011]$, Hypothesis 2a $[F(1, 134) = .42, p = .52, \text{partial eta}^2 = .003]$, or Hypothesis 3a $[F(1, 134) = .53, p = .47, \text{partial eta}^2 = .004]$. Additionally, the results of the analysis using grip time change scores provided no support for Hypothesis 1a $[F(1, 135) = 1.54, p = .22, \text{partial eta}^2 = .011]$, Hypothesis 2a $[F(1, 135) = .45, p = .50, \text{partial eta}^2 = .003]$, or Hypothesis 3a $[F(1, 135) = 1.38, p = .24, \text{partial eta}^2 = .010]$. However, when these analyses were conducted without the seven participants that did not complete a third call due to technical problems, the pattern of results changed. More specifically, there was still no main effect for negative display rules $[F(1, 128) = .68, p = .41, \text{partial eta}^2 = .005]$ or a main effect for positive display rules $[F(1, 128) = .23, p = .64, \text{partial eta}^2 = .002]$ on grip time change scores, but the interaction between negative and positive display rules became marginally significant $[F(1, 128) = 3.60, p = .06, \text{partial eta}^2 = .027]$.

This interaction is plotted in Figure 2. A negative value on the plot indicates that the post-experimental grip time (Grip Time 2) was less than pre-experimental grip time (Grip Time 1) suggesting resource depletion. Subsequent analyses revealed that
negative display rules had no effect on self-regulatory resource depletion when positive display rules were absent \([t(64) = -1.07, p = .29]\). This suggests that participants without any display rules \((M = -3.14 \text{ seconds})\) were no different in their experience of self-regulatory resource depletion than participants with just negative display rules \((M = .69 \text{ seconds})\). However, negative display rules had an effect on self-regulatory resource depletion when positive display rules were present \([t(67) = 2.06, p = .04]\). More specifically, participants with only positive display rules \((M = 4.64 \text{ seconds})\) experienced significantly less resource depletion than participants with both positive and negative display rules \((M = -4.90 \text{ seconds})\). Thus, negative display rules had no effect on self-regulatory resource depletion when positive display rules are absent, but had a big depleting effect when positive display rules are present.

![Positive DR x Negative DR Interaction](image)

Figure 2. Interaction of positive display rules and negative display rules on grip time difference.
An additional examination of the data and interaction revealed that when negative display rules were absent, there was no effect of positive display rules on resource depletion \( t(65) = -1.54, p = .13 \). This suggests that participants without display rules (\( M = -3.14 \) seconds) were no different in their experience of self-regulatory resource depletion than participants with positive display rules only (\( M = 4.64 \)). However, there was a marginally significant effect of positive display rules when negative display rules were present \( t(66) = 1.83, p = .07 \). More specifically, participants who had both negative and positive display rules (\( M = -4.90 \) seconds) experienced more self-regulatory resource depletion after the experiment than participants with only negative display rules (\( M = .69 \) seconds).

As a more stringent test, post hoc Tukey HSD tests were conducted to compare all four grip time difference means to each other using a one-way ANOVA. These results found that there was only a marginally significant mean difference in grip time difference scores for the positive display rule and integrative display rule condition \( (p = .09) \). More specifically, individuals in the positive display rule condition exhibited significantly less resource depletion than participants in the integrative condition. Taken together, this suggests that positive and negative display rules alone do not adversely affect self-regulatory resources. However, positive and negative display rules combined deplete resources. Stated differently, only one type of display rule, either positive or negative display rules are less depleting than having both display rules. Thus, the significant interaction effect was counter to the relationship proposed in hypothesis 3a.

In sum, Hypothesis 1, 2 and 3a were not supported for either measure of resource depletion (i.e., total persistence, persistence as a difference score). Although a significant
interaction was found for persistence as a difference score when the seven participants who did not receive a third caller were removed from the analyses, further examination of the form of this interaction suggests that it was not consistent with hypothesis 3a.

*Momentary Emotional Exhaustion*

Hypotheses 1 – 3(b) were tested by conducting a 2 (positive display rules: absent, present) x 2 (negative display rules: absent, present) between subjects ANCOVA with momentary emotional exhaustion as the dependent variable. Service orientation, gender, and age were included in the analyses as covariates. The results of this analysis provided no support for Hypothesis 1b \( F(1, 136) = .08, p = .77, \text{ partial } \eta^2 = .001 \), Hypothesis 2b \( F(1, 136) = 1.15, p = .29, \text{ partial } \eta^2 = .008 \), or Hypothesis 3b \( F(1, 136) = .03, p = .87, \text{ partial } \eta^2 = .000 \).

*Task Errors*

Hypotheses 1 – 3(c) were tested by conducting a 2 (positive display rules: absent, present) x 2 (negative display rules: absent, present) between subjects ANCOVA with average task errors as the dependent variable. Service orientation, age, gender, and cognitive ability were included in the analyses as covariates. Cognitive ability was measured using university undergraduate cumulative GPA. Although, participant high school GPA, SAT and ACT scores were also obtained from student records, much of this information was missing from student records therefore cumulative university GPA was used as the primary measure of cognitive ability due to the number of participants who had this information available \((n = 117)\).

The results of these analyses revealed no main effect of negative display rule requirements on average task errors \( F(1, 109) = .14, p = .71, \text{ partial } \eta^2 = .001 \). Thus,
Hypothesis 1c was not supported for task errors. There was a marginally significant effect of positive display rules on task errors \([F(1, 109) = 3.10, p = .08, \text{partial } \eta^2 = .028]\). However, examination of the means demonstrated that the effect was in the opposite direction of Hypothesis 2c. More specifically, participants with positive display rule requirements made more average errors \((M = 3.51)\) than participants without positive display rule requirements \((M = 2.74)\). Thus, Hypothesis 2c was not supported for task errors. There was no significant positive display rule by negative display rule interaction for task errors \([F(1, 109) = 2.51, p = .12, \text{partial } \eta^2 = .022]\). Thus, hypothesis 3c was not supported.

Due to the extensive amount of missing university cumulative GPA information, including GPA as a covariate greatly reduced sample size (26 participants did not have cumulative GPA information) and the power for detecting effects of the analyses. Five participants in the control group, eight participants in the positive display rule condition, four participants in the negative display rule condition, and nine participants in the integrative display rules group were missing GPA information. Additional analyses were conducted to examine how GPA was related to task errors and differed across conditions. GPA was significantly related to average task errors \((r = -.36, p < .01)\) which suggested that participants with higher GPAs tended to make less average task errors during the call center task. However, a one-way ANOVA revealed that the conditions did not vary as a function of GPA \([F(3, 113) = .17, p = .92, \text{partial } \eta^2 = .004]\). Therefore, analyses were conducted without GPA as a covariate. The results of the analyses without using GPA as a covariate (and with the full sample) did not change the results: effect of negative display rules \([F(1, 136) = .01, p = .94, \text{partial } \eta^2 = .000]\) and the interactive effect
Emotional Dissonance

Emotional dissonance has been conceptualized by scholars in two different ways – the first is that dissonance is the discrepancy between felt emotions and emotional expectations outlined by display rules (emotion-rule dissonance; Hochschild, 1983; Middleton, 1989; Morris & Feldman, 1997) and the second is that dissonance is the discrepancy between felt emotions and expressed emotions (emotion-display dissonance; Kruml & Geddes, 2000; Pugh et al., 2011). However, examination of the factor structure in the current study suggested that these two conceptualizations may also combine to represent one unified emotional dissonance construct. Therefore hypotheses 1-3(d) were tested using three different measures of emotional dissonance – emotion-display dissonance, emotion-rule dissonance, and the combined constructs of emotional dissonance, which will be referred to in the remainder of this paper as emotional dissonance.

Hypotheses 1 – 3(d) were tested by conducting three 2 (positive display rules: absent, present) x 2 (negative display rules: absent, present) between subjects factor ANCOVA with emotion-display dissonance, emotion-rule dissonance, and emotional dissonance as dependent variables. Service orientation, age, and gender were included in the analyses as covariates. For emotion-display dissonance there was no effect of negative display rule requirements \([F(1, 135) = 0.48, p = .49, \text{partial } \eta^2 = .004]\), failing to support hypothesis 1d. There was a significant main effect for positive display rule...
requirements \( [F(1, 135) = 7.87, p < .01, \text{ partial } \eta^2 = .055] \) but mean comparisons suggested the effect was in the opposite direct of the prediction. Participants with positive display rule requirements \( (M = 3.34) \) experienced greater emotion-display dissonance than participants without positive display rule requirements \( (M = 2.95) \). Thus, Hypothesis 2d was not supported. There was no interaction between display rule conditions, thus Hypothesis 3d was not supported \( [F(1, 135) = .00, p = .99, \text{ partial } \eta^2 = .000] \) for emotion-display dissonance.

For emotion-rule dissonance there was no effect of negative display rules \( [F(1, 136) = .004, p = .95, \text{ partial } \eta^2 = .000] \). Thus, Hypothesis 1d was not supported for emotion-rule dissonance. There was a significant effect of positive display rules \( [F(1, 136) = 6.48, p < .01, \text{ partial } \eta^2 = .045] \) but, again, comparison of the means suggested the effect was in the opposite direction of the prediction. More specifically, participants with positive display rule requirements \( (M = 3.33) \) experienced greater emotion-rule dissonance than participants without this display rule requirement \( (M = 2.97) \). Thus, hypothesis 2d was not supported for emotion-rule dissonance. There was no interaction between negative and positive display rule requirements \( [F(1, 136) = .65, p = .42, \text{ partial } \eta^2 = .005] \), failing to support Hypothesis 3d for emotion-rule dissonance.

For combined emotional dissonance there was no effect of negative display rules \( [F(1, 136) = .10, p = .76, \text{ partial } \eta^2 = .001] \). Thus, Hypothesis 1d was not supported for emotional dissonance. There was a significant effect of positive display rules \( [F(1, 136) = 6.56, p < .01, \text{ partial } \eta^2 = .048] \), but comparison of the means suggested the effect was in the opposite direction of the prediction. More specifically, participants with positive display rule requirements \( (M = 3.33) \) experienced greater emotional dissonance.
than participants without this display rule requirement \( (M = 2.96) \). Thus, hypothesis 2d was not supported for emotional dissonance. There was no interaction between negative and positive display rule requirements \( [F(1, 136) = .26, p = .62, partial \eta^2 = .002] \), failing to support Hypothesis 3d for emotional dissonance.

Display Rules and Individual Differences

Hypotheses 4a-d through 15a-d posited interactive effects between display rule requirements and individual difference variables – Chronic Reappraisal (H4, H5, H8), Chronic Suppression (H6, H7, H9), Positive Affectivity (H10, H11, H14), and Negative Affectivity (H12, H13, H15) on (a) self-regulatory resource depletion, (b) emotional exhaustion, (c) task errors, and (d) emotional dissonance. These hypotheses were tested using hierarchical multiple regression. In Step 1, service orientation, age and gender were entered into the regression equation as covariates. Any additional covariates included in the regression equations are described below and also included in Step 1. In Step 2, I entered the contrast coded categorical display rule variables (i.e., positive display rules: present vs. absent and negative display rules: present vs. absent) and the mean centered continuous individual difference variable of interest. In Step 3, I added the interaction terms between the categorical variables (i.e., positive display rule, negative display rule) and the centered continuous variable (i.e., positive display rule x reappraisal). Finally, in Step 4, I entered the appropriate 3-way interaction between and all three variables of interest (i.e., positive display rule x negative display rule x suppression). The specific results of these analyses are described below.
This study examined how display rules combine with two chronic emotion regulation tendencies outlined by Gross and John (2003) to predict individual outcomes. The two strategies include chronic reappraisal and chronic suppression. These findings are detailed below.

**Chronic Reappraisal**

The results of the four step multiple hierarchical regression equations between display rules and chronic reappraisal are summarized in Table 9. Hypothesis 4 (negative display rules) and 5 (positive display rules) were tested in Step 3 of the hierarchical regression equation. Hypothesis 8 (3-way interaction) was tested in step 4 of the hierarchical regression equation. Although not formally hypothesized, I examined the effect of reappraisal on each of the dependent variables examined in this study. As shown in Table 9, there was no main effect of reappraisal on self-regulatory resource depletion measured as grip time 2, controlling for grip time 1 ($\beta = .05, p = .39$) or as grip time difference ($\beta = .03, p = .70$). There was a main effect of reappraisal on emotional exhaustion suggesting that individuals higher in reappraisal tended to experience less emotional exhaustion ($\beta = -.19, p = .04$). There was a main effect of reappraisal on average errors when controlling for GPA ($\beta = -.22, p = .02$) which indicated that individuals higher in reappraisal made fewer average errors, however, this effect became non-significant when not controlling for GPA ($\beta = -.14, p = .12$). There was no effect of reappraisal on emotion-display dissonance ($\beta = .07, p = .38$), emotion-rule dissonance ($\beta = -.05, p = .59$), or the combined emotional dissonance ($\beta = .02, p = .83$). Thus,
reappraisal appears to have had some independent effects on a few of the outcomes examined in this study.

Table 9. Results of the Hierarchical Multiple Regression for Chronic Reappraisal and Display Rules in Predicting Outcomes (Tests of Hypotheses 4, 5, 8)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Grip Time 2</th>
<th>Grip Time Difference</th>
<th>Emo Exhaust (b)</th>
<th>Average Errors</th>
<th>Emo-display (c)</th>
<th>Emo-rule</th>
<th>Emo-diss</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.03</td>
<td>-.16*</td>
<td>-.08</td>
<td>.07</td>
<td>-.21**</td>
<td>-.09</td>
<td>-.16*</td>
</tr>
<tr>
<td>Age</td>
<td>.10^</td>
<td>.14</td>
<td>-.21**</td>
<td>.07</td>
<td>-.31**</td>
<td>-.30</td>
<td>-.33**</td>
</tr>
<tr>
<td>Service Orientation</td>
<td>-.03</td>
<td>-.05</td>
<td>-.10</td>
<td>.07</td>
<td>-.13^</td>
<td>-.02</td>
<td>-.09</td>
</tr>
<tr>
<td>Grip Time 1</td>
<td>.81**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>University GPA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.35**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR</td>
<td>.04</td>
<td>.06</td>
<td>.08</td>
<td>.14</td>
<td>.22**</td>
<td>.20**</td>
<td>.23**</td>
</tr>
<tr>
<td>NegDR</td>
<td>-.07</td>
<td>-.11</td>
<td>.01</td>
<td>.06</td>
<td>.04</td>
<td>.01</td>
<td>.03</td>
</tr>
<tr>
<td>Reappraisal</td>
<td>.05</td>
<td>.03</td>
<td>-.19*</td>
<td>-.22*</td>
<td>.07</td>
<td>-.05</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR</td>
<td>-.03</td>
<td>-.10</td>
<td>-.02</td>
<td>.09</td>
<td>.00</td>
<td>-.06</td>
<td>-.03</td>
</tr>
<tr>
<td>PosDR x Reappraisal</td>
<td>.00</td>
<td>.01</td>
<td>-.12</td>
<td>.15^</td>
<td>.02</td>
<td>-.09</td>
<td>-.04</td>
</tr>
<tr>
<td>NegDR x Reappraisal</td>
<td>.05</td>
<td>.05</td>
<td>-.05</td>
<td>-.02</td>
<td>-.12</td>
<td>-.06</td>
<td>-.10</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR x Reappraisal</td>
<td>-.03</td>
<td>-.08</td>
<td>.05</td>
<td>-.15^</td>
<td>.04</td>
<td>.18*</td>
<td>.11</td>
</tr>
</tbody>
</table>

Note. All values in the table are the standardized regression coefficients. PosDR = Positive Display Rule Manipulation, NegDR = Negative Display Rule Manipulation, Emo=emotional, Diss = Dissonance, Emo Exhaust = Emotional Exhaustion. ^p < .10, *p < .05, **p < .01.

**Chronic Reappraisal and Negative Display Rules**

Hypotheses 4a-d was that reappraisal moderates the effect of negative display rules on outcomes, such that the effect of negative display rules on outcomes is weaker when reappraisal is high compared to when it is low. Hypothesis 4a pertained to regulatory resources and was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant negative display rule by reappraisal interaction in predicting grip time 2 (β = .05, p = .39) or grip time difference (β = .05, p = .55). Thus hypothesis 4a was not supported.
Hypothesis 4b tested the effect of negative display rules on momentary emotional exhaustion. The results of these analysis found no reappraisal by negative display rule interaction ($\beta = -.05, p = .58$) for momentary emotional exhaustion. Thus, hypothesis 4b was not supported.

Hypothesis 4c, pertaining to task performance, was tested using average task errors as the outcome variable, controlling for cumulative undergraduate GPA. There was no significant negative display rule by reappraisal interaction in predicting average errors ($\beta = -.02, p = .86$). Thus hypothesis 4c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate on the full sample, however this did not change the results of the analyses, again failing to provide support for hypothesis 4c ($\beta = .04, p = .66$).

Hypothesis 4d, pertaining to emotional dissonance, was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and the combined emotional dissonance as outcome variables. There was no significant negative display rule by reappraisal interaction in predicting emotion-display dissonance ($\beta = -.12, p = .15$), emotions-rule dissonance ($\beta = -.06, p = .45$), or combined emotional dissonance ($\beta = -.10, p = .24$). Thus hypothesis 4d was not supported.

*Chronic Reappraisal and Positive Display Rules*

Hypothesis 5a-d was that reappraisal moderates the effect of positive display rules on outcomes, such that the effect of positive display rules on outcomes is stronger when reappraisal is high compared to when it is low. Hypothesis 5a, pertaining to regulatory resources, was tested two ways, using grip time 2 (controlling for grip time 1)
and grip time difference as outcome variables. There was no significant positive display rule by reappraisal interaction in predicting grip time 2 ($\beta = .00, p = .99$) or grip time difference ($\beta = .01, p = .94$). Thus hypothesis 5a was not supported.

Hypothesis 5b examined momentary emotional exhaustion as an outcome of positive display rules. The results of the analysis found no reappraisal by positive display rule interaction ($\beta = -.12, p = .19$) for momentary emotional exhaustion. Thus, hypothesis 5b was not supported.

Hypothesis 5c, pertaining to task performance, was tested using average task errors as outcome variables and controlling for cumulative undergraduate GPA. There was a marginally significant positive display rule by reappraisal interaction in predicting average errors ($\beta = .15, p = .09$; See Figure 3). To further understand the nature of this interaction, I calculated the simple slopes of the interactions (Aiken & West, 1991; Preacher, Curran, & Bauer, 2006). The nature of this interaction suggests that the positive effect of positive display rules on average task errors is stronger for individuals high in reappraisal (simple slope at +1 SD reappraisal, $b = 6.82, p = .06$) than low in reappraisal (simple slope at -1 SD reappraisal, $b = 5.19, p = .06$). Stated differently, the increase in average task errors due to the presence of positive display rules is larger for individuals high in reappraisal than for individuals low in reappraisal. Thus, Hypothesis 5c was not supported for errors. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate. When excluding GPA as a covariate and using the full sample, the interaction became nonsignificant for predicting task errors ($\beta = .05, p = .56$).
Hypothesis 5d, pertaining to emotional dissonance, was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant positive display rule by reappraisal interaction in predicting emotion-display dissonance ($\beta = .02, p = .84$), emotion-rule dissonance ($\beta = -.09, p = .27$), or combined emotional dissonance ($\beta = -.04, p = .66$). Thus hypothesis 5d was not supported.

Chronic Reappraisal and Positive and Negative Display Rules

Hypothesis 8a-d, pertaining to the three-way interaction between the two display rule manipulations and chronic reappraisal, was tested in Step 4 of the hierarchical regression equation described above. These hypotheses proposed that the effect of negative display rules would be weaker when positive display rules were present than
when they were absent and when reappraisal was high compared to when it was low.

Hypothesis 8a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant three-way interaction in predicting grip time 2 ($\beta = -.03$, $p = .56$) or grip time difference ($\beta = -.08$, $p = .38$). Thus hypothesis 8a was not supported. No three-way interaction was found ($\beta = .05$, $p = .60$) for emotional exhaustion, failing to provide support for hypothesis 8b.

Hypothesis 8c was tested using average task errors as the outcome variable and controlling for cumulative undergraduate GPA. There was a marginally significant three-way interaction in predicting average errors ($\beta = -.15$, $p = .09$) (See Figure 4). For a more specific test of my hypotheses, I conducted simple slopes analyses (Aiken & West, 1991; Preacher et al., 2006). For participants low in reappraisal, the effect of the negative display rule manipulation on average errors was negative when positive display rules were present; however, this slope was not significantly different from zero (slope = -3.85, $p = .30$). The effect of the negative display rule manipulation on average errors was positive when positive display rules were absent, but again this slope was not significantly different from zero (slope = 4.45, $p = .27$).

For participants high in reappraisal, the effect of negative display rules on average errors was negative when positive display rules were present, however, this slope was not significantly different from zero (slope = -5.52, $p = .27$). The effect of negative display rules on average errors was positive when positive display rules were absent, but this slope was not significantly different from zero (slope = 6.07, $p = .26$). Taken together, the negative display rules led to fewer average errors when positive display rules were present but more errors when positive display rules were absent. These effects appeared
to be more pronounced for individuals high in reappraisal than low in reappraisal. Thus, hypothesis 8c was not supported.

Figure 4. 3-way interaction of positive display rules, negative display rules, and reappraisal on average errors with positive display rules as the moderator.

To aid in interpretation, and to get a better understanding of this three-way interaction, analyses were conducted with positive display rules as the predictor and
negative display rules as the moderator. This three-way interaction is plotted in Figure 5. As shown, for participants low in reappraisal, the effect of positive display rules on average errors was positive when negative display rules were present, but this slope was not significantly different from zero (slope = 2.06, \( p = .54 \)). The effect of positive display rules on average errors was also positive when negative display rules were absent, but this slope was significantly different from zero (slope = 10.34, \( p = .02 \)). Thus, when negative display rules were absent, the presence of positive display rules led to more average errors than when positive display rules were absent. Stated differently, the presence of positive display rules led to more errors than the absence of positive display rules.

For participants high in reappraisal, the effect of positive display rules on average errors was positive when negative display rules were absent, but this slope was not significantly different from zero (slope = 2.36, \( p = .61 \)). The effect of positive display rules on average errors was positive when negative display rules were absent, and this slope was significantly different from zero (slope = 13.93, \( p = .02 \)). Thus, when negative display rules were absent, the presence of positive display rules led to more average errors than when positive display rules were absent. This effect was stronger for participants high in reappraisal than low in reappraisal.

Taken together, participants committed more average errors when negative display rules were absent and positive display rules were present than when positive display rules were absent. Stated differently, participants made more errors with only positive display rules than when no display rules were present. Additionally, this effect
was more pronounced for individuals high in reappraisal than lower in reappraisal. Thus, hypothesis 8c was not supported.

Due to the number of participants with missing GPA data, these analyses were conducted again without GPA as a covariate. However, the three-way interaction for average errors became nonsignificant, failing to provide support for hypothesis 8c ($\beta = - .06$, $p = .53$). Taken together, the negative effect of negative display rules on average
errors when positive display rules were present was stronger for individuals high in reappraisal than low in reappraisal. The positive effect of negative display rules on average errors was stronger for individuals high in reappraisal than low in reappraisal.

Hypothesis 8d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant three-way interaction in predicting emotion-display dissonance ($\beta = .04, p = .59$) or the combined emotional dissonance measure ($\beta = .11, p = .16$). However, there was a significant three-way interaction for emotion-rule dissonance ($\beta = .18, p < .05$) (See Figure 6).

For a more specific test of my hypotheses, I conducted simple slopes analyses (Aiken & West, 1991; Preacher et al., 2006). For participants low in reappraisal, the effect of negative display rules on emotion-rule dissonance was positive when positive display rules were present, however, this slope was not significantly different from zero (slope = $1.14, p = .42$). The effect of negative display rules on emotion-rule dissonance was negative when positive display rules were absent and this slope was significantly different from zero (slope = $-2.87, p = .05$). Thus, for individuals low in reappraisal, emotional-rule dissonance was higher for when both negative and positive display rules were absent than when negative display rules were present without positive display rules.

For participants high in reappraisal, the effect of negative display rules on emotion-rule dissonance was positive when positive display rules were present, however, this slope was not significantly different from zero (slope = $1.59, p = .41$). The effect of negative display rules on emotion-rule dissonance was negative when positive display rules were absent and this slope was significantly different from zero (slope = $-3.96, p = .
.05). Thus, for individuals high in reappraisal, emotional-rule dissonance was higher for when both negative and positive display rules were absent than when negative display rules were present without positive display rules. This effect appeared more pronounced for individuals high than low in reappraisal. Hypothesis 8d was not supported.

![Figure 6. 3-way interaction of positive display rules, negative display rules, and reappraisal on emotion-rule dissonance with positive display rules as the moderator.](image)

To aid in interpretation, and to get a better understanding of this three-way interaction, analyses were conducted with positive display rules as the predictor and negative display rules as the moderator. This three-way interaction is plotted in Figure 7.
As shown, for participants low in reappraisal, the effect of positive display rules on emotion-rule dissonance was positive when negative display rules were present, but this slope was not significantly different from zero (slope = 1.25, $p = .35$). The effect of positive display rules on emotion-rule dissonance was negative when negative display rules were absent, and this slope was significantly different from zero (slope = -2.77, $p = .05$). Thus, when negative display rules were absent participants experienced more emotion-rule dissonance than when positive display rules were present, but only when negative display rules were not present.

For participants high in reappraisal, the effect of positive display rules on emotion-rule dissonance was positive when negative display rules were present, but this slope was not significantly different from zero (slope = 1.63, $p = .37$). The effect of positive display rules on emotion-rule dissonance was negative and significantly different from zero when negative display rules were absent (slope = -3.92, $p = .03$). Thus, when negative display rules were absent, participants experienced more emotion-rule dissonance than when positive display rules were present, but only when negative display rules were not present. Further, this effect appeared to be more pronounced for individuals high in reappraisal than low in reappraisal.

Taken together, participants experienced greater emotion-rule dissonance when positive and negative display rules were both absent than when only positive or negative display rules were present. Additionally, these effects appeared to be more pronounced for individuals high in reappraisal than low in reappraisal. Thus, hypothesis 8d was not supported.
Figure 7. 3-way interaction of positive display rules, negative display rules, and reappraisal on emotion-rule dissonance with negative display rules as the moderator.

**Chronic Suppression**

The results of the four step multiple hierarchical regression equations between display rules and chronic suppression are summarized in Table 10. Hypotheses 6 and 7
were tested in Step 3 of the hierarchical regression equation described above. Hypothesis 9 was tested in Step 4 of the hierarchical regression equation. Although not formally hypothesized, I examined the effect of suppression on each of the dependent variables examined in this study. As shown in Table 12, there was no main effect of suppression on self-regulatory resource depletion measured as grip time 2, controlling for grip time 1 ($\beta = .08, p = .15$). There was a marginally significant effect of suppression on grip time difference ($\beta = .16, p = .07$) indicating the individuals higher in suppression tended to be less depleted than individuals lower in suppression. There was a marginally significant main effect of suppression on emotional exhaustion ($\beta = -.14, p = .09$) suggesting that individuals higher in suppression tended to experience less emotional exhaustion. There was no effect of suppression on average errors when controlling for GPA ($\beta = -.01, p = .27$) nor when not controlling for GPA ($\beta = -.02, p = .78$). There was no effect of suppression on emotion-display ($\beta = -.09, p = .27$), emotion-rule ($\beta = .03, p = .68$), or combined emotional dissonance ($\beta = -.03, p = .68$).

**Chronic Suppression and Negative Display Rules**

Hypotheses 6a-d were that suppression moderates the effect of negative display rules on outcomes, such that the effect of negative display rules would be stronger when suppression is high compared to when it is low. Hypothesis 6a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant negative display rule by suppression interaction in predicting grip time 2 ($\beta = -.02, p = .66$) or grip time difference ($\beta = -.05, p = .57$). Thus hypothesis 6a was not supported. No suppression by negative display rule interaction
was found ($\beta = .07, p = .41$) for emotional exhaustion, failing to provide support for hypothesis 6b.

Table 10. Results of the Hierarchical Multiple Regression for Chronic Suppression and Display Rules in Predicting Outcomes (Tests of Hypotheses 6, 7, 9).

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Resource Depletion (a)</th>
<th>Emo Exhaust (b)</th>
<th>Performance (c)</th>
<th>Emotional Dissonance (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grip Time 2</td>
<td>Grip Time Difference</td>
<td>Emo Exhaust</td>
<td>Average Errors</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.03</td>
<td>-.16*</td>
<td>-.08</td>
<td>.07</td>
</tr>
<tr>
<td>Age</td>
<td>.10^</td>
<td>.14</td>
<td>-.21**</td>
<td>.07</td>
</tr>
<tr>
<td>Service Orientation</td>
<td>-.03</td>
<td>-.05</td>
<td>-.10</td>
<td>.07</td>
</tr>
<tr>
<td>Grip Time 1</td>
<td>.81**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>University GPA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.35**</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR</td>
<td>.03</td>
<td>.06</td>
<td>.09</td>
<td>.17^</td>
</tr>
<tr>
<td>NegDR</td>
<td>-.07</td>
<td>-.11</td>
<td>-.02</td>
<td>.03</td>
</tr>
<tr>
<td>Suppression</td>
<td>.08</td>
<td>.16^</td>
<td>-.14^</td>
<td>-.10</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR</td>
<td>-.04</td>
<td>-.10</td>
<td>-.01</td>
<td>.13</td>
</tr>
<tr>
<td>PosDR x Suppression</td>
<td>-.02</td>
<td>-.06</td>
<td>-.04</td>
<td>.17^</td>
</tr>
<tr>
<td>NegDR x Suppression</td>
<td>-.02</td>
<td>-.05</td>
<td>.07</td>
<td>.11</td>
</tr>
<tr>
<td>Step 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR x Suppression</td>
<td>-.03</td>
<td>-.01</td>
<td>-.07</td>
<td>.06</td>
</tr>
</tbody>
</table>

Note. All values in the table are the standardized regression coefficients. PosDR = Positive Display Rule Manipulation, NegDR = Negative Display Rule Manipulation, Emo=emotional, Emo Exhaust = Emotional Exhaustion. ^ p < .10, * p < .05, ** p < .01.

Hypothesis 6c was tested using average task errors as the outcome variable and controlling for cumulative undergraduate GPA. There was no significant negative display rule by suppression interaction in predicting average errors ($\beta = .11, p = .20$). Thus hypothesis 6c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however this did not change the results of the analyses, again failing to provide support for hypothesis 6c ($\beta = .07, p = .44$).
Hypothesis 6d was tested three ways, using emotion-display, emotion-rule, and combined emotional dissonance as outcome variables. There was no significant negative display rule by suppression interaction in predicting emotion-display dissonance ($\beta = - .02, p = .79$), emotion-rule dissonance ($\beta = .06, p = .47$), or combined emotional dissonance ($\beta = .02, p = .81$). Thus hypothesis 6d was not supported.

**Chronic Suppression and Positive Display Rules**

Hypotheses 7a-d was that suppression moderates the effect of positive display rules on outcomes, such that the effect of positive display rules on outcomes is weaker when suppression is high compared to when it is low. Hypothesis 7a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant positive display rule by suppression interaction in predicting grip time 2 ($\beta = -.02, p = .77$) or grip time difference ($\beta = -.06, p = .49$). Thus hypothesis 7a was not supported. No suppression by positive display rule interaction was found ($\beta = -.04, p = .65$) for momentary emotional exhaustion, failing to provide support for hypothesis 7b.

Hypothesis 7c was tested using average task errors as the outcome variable controlling for cumulative undergraduate GPA. There was a marginally significant positive display rule by suppression interaction in predicting average errors ($\beta = .17, p = .06$) (See Figure 8). To further understand the nature of this interaction, I calculated the simple slopes of the interactions (Aiken & West, 1991; Preacher et al., 2006). The nature of this interaction suggests that the positive effect of positive display rules on average task errors is stronger for individuals high in suppression (simple slope at +1 SD suppression, $b = 3.71, p < .05$) than low in suppression (simple slope at -1 SD suppression, $b = 0.81, p = .49$).
suppression, $b = 2.11, p < .01$). Stated differently, the increase in task errors due to the presence of positive display rules is larger for individuals high in suppression than for individuals low in suppression. Thus, hypothesis 7c was not supported for task errors controlling for cumulative GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however the interaction became non-significant when not controlling for GPA ($\beta = .05, p = .53$).

Hypothesis 7d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant positive display rule by suppression interaction in predicting emotion-display dissonance ($\beta = .06, p = .49$) emotion-rule dissonance ($\beta = .02, p = .83$), or combined emotional dissonance ($\beta = .04, p = .60$). Thus hypothesis 7d was not supported.
Chronic Suppression and Positive and Negative Display Rules

Hypothesis 9a-d predicted a three-way interaction between positive display rules, negative display rules, and suppression in predicting outcomes, such that the effect of negative display rules will be weaker when positive display rules are present than when they are absent and when suppression is low compared to when it is high. Hypothesis 9a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant three-way interaction in predicting grip time 2 ($\beta = -.03, p = .62$) or grip time difference ($\beta = -.01, p = .87$). Thus hypothesis 9a was not supported. No three-way interaction was found ($\beta = -.07, p = .42$) for momentary emotional exhaustion, failing to provide support for hypothesis 9b.

Hypothesis 9c was tested using average task errors as the outcome variable and controlling for cumulative undergraduate GPA. There was no significant three-way interaction in predicting average errors ($\beta = .06, p = .49$). Thus hypothesis 9c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate. The three-way interaction became marginally significant for average errors ($\beta = .15, p = .09$) (See Figure 9).

For a more specific test of my hypotheses and to interpret the three-way interaction, I conducted simple slopes analyses (Aiken & West, 1991; Preacher et al., 2006). For participants low in suppression, the effect of negative display rules on average errors was positive when positive display rules were present and this slope was significantly different from zero (slope = 2.22, $p < .05$). The effect of negative display rules on average errors was negative when positive display rules were absent and this
slope was not significantly different from zero (slope = -1.43, \(p = .21\)). This finding suggests that participants made the most task errors when both negative and positive display rules were present than when negative display rules were absent, but positive display rules were present.

Figure 9. 3-way interaction of positive display rules, negative display rules, and suppression on average errors with positive display rules as the moderator.

For participants high in suppression, the effect of negative display rules on average errors was positive when positive display rules were present and this slope was significantly different from zero (slope = 4.27, \(p < .05\)). The effect of negative display rules on average errors was negative when positive display rules were absent and this
slope was not significantly different from zero (slope = -2.32, \( p = .31 \)). Taken together, the effect of negative display rules on average errors was positive when positive display rules were present and negative when positive display rules were absent. However, when positive display rules were present, average errors were significantly higher when negative display rules were also present than when they were absent. Additionally, this effect was more pronounced for individuals high in suppression than low in suppression. Thus, hypothesis 9c was not supported.

To aid in interpretation, and to get a better understanding of this three-way interaction, analyses were conducted with positive display rules as the predictor and negative display rules as the moderator. This three-way interaction is plotted in Figure 10. As shown, for participants low in suppression, the effect of positive display rules on average errors was positive when negative display rules were present and this slope was significantly different from zero (slope = 2.84, \( p = .01 \)). The effect of positive display rules on average errors was negative when negative display rules were absent, and this slope was not significantly different from zero (slope = -.81, \( p = .49 \)). Thus, when negative display rules were present, the presence of positive display rules led to greater average errors than when positive display rules were absent.

For participants high in suppression, the effect of positive display rules on average errors was positive when negative display rules were present and this slope was significantly different from zero (slope = 4.70, \( p = .02 \)). The effect of positive display rules on average errors was negative when negative display rules were absent, and this slope was not significantly different from zero (slope = -1.89, \( p = .42 \)). Thus, when negative display rules were present, the presence of positive display rules led to greater
average errors than when positive display rules were absent and this effect was more pronounced for participants high in suppression than low in suppression.

Figure 10. 3-way interaction of positive display rules, negative display rules, and suppression on average errors with negative display rules as the moderator.

Taken together, participants committed more average errors when both positive and negative display rules were both present than when only positive or negative display rules were present. Additionally, these effects were more pronounced for individuals high in suppression than low in suppression. Thus, hypothesis 9c was not supported.
Hypothesis 9d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no three-way interaction in predicting emotion-display dissonance ($\beta = -.06, p = .43$), emotion-rule dissonance ($\beta = .01, p = .90$), or combined emotional dissonance ($\beta = -.03, p = .72$). Thus hypothesis 9d was not supported.

Dispositional Affectivity

In addition to examining the combined effects of display rules and chronic emotion regulation, this study also examined how dispositional affectivity, both positive and negative affectivity combined with display rules to predict outcomes. These results are summarized in more detail below.

**Positive Affectivity**

The results of the four step hierarchical regression equations between display rules and positive affectivity are summarized in Table 11. Hypotheses 10 and 11 were tested in Step 3 of the hierarchical regression equation described above. Hypothesis 14 was tested in Step 4 of the hierarchical regression equation. Although not formally hypothesized, I examined the effect of positive affectivity on each of the dependent variables examined in this study. There was no main effect of positive affectivity on self-regulatory resource depletion measured as grip time 2, controlling for grip time 1 ($\beta = -.02, p = .70$) or as grip time difference ($\beta = -.07, p = .42$). There was no effect of positive affectivity on emotional exhaustion ($\beta = -.03, p = .73$). There was no effect of positive affectivity on average errors when controlling for GPA ($\beta = -.07, p = .46$) or when not controlling for GPA ($\beta = .06, p = .54$). There was no effect of positive affectivity on
emotion-display ($\beta = .03, p = .72$), emotion-rule ($\beta = -.01, p = .89$), or combined emotional dissonance ($\beta = .01, p = .90$).

Table 11. Results of the Hierarchical Multiple Regression for Positive Affectivity and Display Rules in Predicting Outcomes (Tests of Hypotheses 10, 11, 14)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Resource Depletion (a)</th>
<th>Emo Exhaust (b)</th>
<th>Performance (c)</th>
<th>Emotional Dissonance (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grip Time 2</td>
<td>Grip Time Difference</td>
<td>Emo Exhaust</td>
<td>Average Errors</td>
<td>Emo-display</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.03</td>
<td>-0.16</td>
<td>0.08</td>
<td>-0.21**</td>
</tr>
<tr>
<td>Age</td>
<td>0.10*</td>
<td>0.14</td>
<td>0.21**</td>
<td>0.07</td>
</tr>
<tr>
<td>Service Orientation</td>
<td>-0.03</td>
<td>-0.05</td>
<td>0.10</td>
<td>0.07</td>
</tr>
<tr>
<td>Grip Time 1</td>
<td>0.81**</td>
<td></td>
<td></td>
<td>0.35**</td>
</tr>
<tr>
<td>University GPA</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Step 2

<table>
<thead>
<tr>
<th>Step 2</th>
<th>PosDR</th>
<th>NegDR</th>
<th>PosAffect</th>
<th>PosDR x NegDR</th>
<th>PosDR x PosAffect</th>
<th>NegDR x PosAffect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.03</td>
<td>0.06</td>
<td>-0.02</td>
<td>-0.04</td>
<td>-0.02</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>0.05</td>
<td>0.11</td>
<td>-0.07</td>
<td>0.16^</td>
<td>0.04</td>
<td>-0.12</td>
</tr>
<tr>
<td></td>
<td>0.09</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td>0.15</td>
<td>0.03</td>
<td>-0.07</td>
<td>0.03</td>
<td>0.05</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

Step 3

<table>
<thead>
<tr>
<th>Step 3</th>
<th>PosDR x NegDR</th>
<th>PosDR x PosAffect</th>
<th>NegDR x PosAffect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.03</td>
<td>-0.00</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>-0.03</td>
<td>-0.04</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>-0.05</td>
<td>0.05</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>-0.04</td>
<td>0.07</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

Note. All values in the table are the standardized regression coefficients. PosDR = Positive Display Rule Manipulation, NegDR = Negative Display Rule Manipulation, PosAffect = Positive Affectivity, emo=emotional, Emo Exhaust = Emotional Exhaustion.  * $p < .10$, ^ $p < .05$, ** $p < .01$.  

Positive Affectivity and Negative Display Rules

Hypotheses 10a-d were that positive affectivity moderates the effect of negative display rules on outcomes, such that the effect of negative display rules on outcomes is weaker when positive affectivity is high compared to when it is low. Hypothesis 10a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant negative display rule by positive affectivity interaction in predicting grip time 2 ($\beta = -.06, p = .24$) or grip time difference ($\beta = -.12, p = .16$). Thus hypothesis 10a was not supported. No negative display rule by positive affectivity interaction was found for emotional exhaustion ($\beta = -.02, p = .82$),
failing to provide support for hypothesis 10b. Hypothesis 10c was tested using average task errors as the outcome variable and controlling for cumulative undergraduate GPA. There was no significant negative display rule by positive affectivity interaction in predicting average errors \((\beta = .07, p = .46)\). Thus hypothesis 10c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however this did not change the results of the analyses, again failing to provide support for hypothesis 10c \((\beta = .08, p = .35)\). Hypothesis 10d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant negative display rule by positive affectivity interaction in predicting emotion-display dissonance \((\beta = .08, p = .35)\), emotion-rule dissonance \((\beta = .10, p = .25)\), or emotional dissonance \((\beta = .09, p = .28)\). Thus hypothesis 10d was not supported.

**Positive Affectivity and Positive Display Rules**

Hypothesis 11a-d was that positive affectivity moderates the effect of positive display rules on outcomes, such that the effect of positive display rules on outcomes is stronger when positive affectivity is high compared to when it is low. Hypothesis 11a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant positive display rule by positive affectivity interaction in predicting grip time 2 \((\beta = .02, p = .74)\) or grip time difference \((\beta = .00, p = .97)\). Thus hypothesis 11a was not supported. No positive display rule by positive affectivity interaction was found \((\beta = .04, p = .61)\) for momentary emotional exhaustion, failing to provide support for hypothesis 11b. Hypothesis 11c was
tested using average task errors as the outcome variable and controlling for cumulative undergraduate GPA. There was no significant positive display rule by positive affectivity interaction in predicting average errors ($\beta = .00, p = .98$). Thus hypothesis 11c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however this did not change the results of the analyses, again failing to provide support for hypothesis 11c ($\beta = .08, p = .38$). Hypothesis 11d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant positive display rule by positive affectivity interaction in predicting emotion-display dissonance ($\beta = -.02, p = .85$), emotion-rule dissonance ($\beta = .02, p = .83$), or emotional dissonance ($\beta = .00, p = .93$). Thus hypothesis 11d was not supported.

**Positive Affectivity and Positive and Negative Display Rules**

Hypothesis 14a-d predicted a three-way interaction between positive display rules, negative display rules, and positive affectivity in predicting outcomes, such that the effect of negative display will be weaker when positive display rules are present compared to when they are absent and when positive affectivity is high compared to when it is low. Hypothesis 14a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant three-way interaction in predicting grip time 2 ($\beta = -.03, p = .64$) or grip time difference ($\beta = -.03, p = .75$). Thus hypothesis 14a was not supported. No three-way interaction was found ($\beta = .00, p = .99$) for emotional exhaustion, failing to provide support for hypothesis 14b.
Hypothesis 14c was tested using average task errors as outcome variable and controlling for cumulative undergraduate GPA. There was no significant three-way interaction in predicting average errors ($\beta = .05, p = .63$). Thus hypothesis 14c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however this did not change the results of the analyses, again failing to provide support for hypothesis 14c ($\beta = .01, p = .93$). Hypothesis 14d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and emotional dissonance as outcome variables. There was no three-way interaction in predicting emotion-display dissonance ($\beta = -.07, p = .37$), emotion-rule dissonance ($\beta = .01, p = .95$), or combined emotional dissonance ($\beta = -.04, p = .63$). Thus hypothesis 14d was not supported.

**Negative Affectivity**

The results of the four step multiple hierarchical regression equations between display rules and negative affectivity are summarized in Table 12. Hypotheses 12 and 13 were tested in Step 3 of the hierarchical regression equation described above. Hypothesis 14 was tested in Step 4 of the hierarchical regression equation. Although not formally hypothesized, I examined the effect of negative affectivity on each of the dependent variables examined in this study. As shown in Table 15, there was no main effect of negative affectivity on self-regulatory resource depletion measured as grip time 2, controlling for grip time 1 ($\beta = .01, p = .85$) or as grip time difference ($\beta = .05, p = .58$). There was an effect of negative affectivity on emotional exhaustion ($\beta = .29, p = .001$) suggesting that individuals higher on negative affectivity tended to experience greater emotional exhaustion. There was no effect of negative affectivity on average errors when
controlling for GPA ($\beta = .05, p = .55$) or when not controlling for GPA ($\beta = -.05, p = .61$). There was no effect of negative affectivity on emotion-display ($\beta = .07, p = .40$), emotion-rule ($\beta = .02, p = .79$), or combined emotional dissonance ($\beta = .05, p = .54$).

Table 12. Results of the Hierarchical Multiple Regression for Negative Affectivity and Display Rules in Predicting Outcomes (Tests of Hypotheses 12, 13, 15)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Resource Depletion (a)</th>
<th>Emo Exhaust (b)</th>
<th>Performance (c)</th>
<th>Emotional Dissonance (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.03</td>
<td>-.16$^\wedge$</td>
<td>-.08</td>
<td>.07</td>
</tr>
<tr>
<td>Age</td>
<td>.10$^\wedge$</td>
<td>.14</td>
<td>-.21**</td>
<td>.07</td>
</tr>
<tr>
<td>Service Orientation</td>
<td>-.03</td>
<td>-.05</td>
<td>-.10</td>
<td>.07</td>
</tr>
<tr>
<td>Grip Time 1</td>
<td>.81**</td>
<td>-.10</td>
<td>-.25**</td>
<td>-.35**</td>
</tr>
<tr>
<td>University GPA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR</td>
<td>.03</td>
<td>.06</td>
<td>.08</td>
<td>.15$^\wedge$</td>
</tr>
<tr>
<td>NegDR</td>
<td>-.06</td>
<td>-.11</td>
<td>-.03</td>
<td>.03</td>
</tr>
<tr>
<td>NegAffect</td>
<td>.01</td>
<td>.05</td>
<td>.29**</td>
<td>.06</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR</td>
<td>-.04</td>
<td>-.10</td>
<td>-.01</td>
<td>.14</td>
</tr>
<tr>
<td>PosDR x NegAffect</td>
<td>-.06</td>
<td>-.06</td>
<td>-.02</td>
<td>-.08</td>
</tr>
<tr>
<td>NegDR x NegAffect</td>
<td>-.01</td>
<td>-.03</td>
<td>-.09</td>
<td>.15$^\wedge$</td>
</tr>
<tr>
<td>Step 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PosDR x NegDR x NegAffect</td>
<td>.09</td>
<td>.16$^\wedge$</td>
<td>.01</td>
<td>-.03</td>
</tr>
</tbody>
</table>

Note. All values in the table are the standardized regression coefficients. PosDR = Positive Display Rule Manipulation, NegDR = Negative Display Rule Manipulation, NegAffect = Negative Affectivity, emo=emotional, Emo Exhaust = Emotional Exhaustion. $^\wedge p < .10$, $^\wedge p < .05$, **$p < .01$.

**Negative Affectivity and Negative Display Rules**

Hypothesis 12a-d was that negative affectivity moderates the effect of negative display rules on outcomes, such that the effect of negative display rules on outcomes is stronger when negative affectivity is high compared to when it is low. Hypothesis 12a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant negative display rule by negative affectivity interaction in predicting grip time 2 ($\beta = -.01, p = .83$) or grip time difference ($\beta = -.03, p = .76$). Thus hypothesis 12a was not supported. No negative
display rule by negative affectivity interaction was found for momentary emotional exhaustion ($\beta = -.09, p = .29$), failing to provide support for hypothesis 12b.

Hypothesis 12c was tested using average task errors as outcome variable and controlling for cumulative undergraduate GPA. There was a marginally significant negative display rule by negative affectivity interaction in predicting average errors ($\beta = .15, p = .09$). To further understand the nature of this interaction, I calculated the simple slopes of the interactions (Aiken & West, 1991; Preacher et al., 2006). As shown in Figure 11, the nature of this interaction suggests that the positive effect of negative display rules on average task errors is stronger for individuals high on negative affectivity (simple slope, $b = 3.08, p = .10$) than low on negative affectivity (simple slope, $b = 1.63, p = .14$). Stated differently, the increase in task errors due to the presence of negative display rules is larger for individuals high on negative affectivity than for individuals low on negative affectivity. This pattern of results supports hypothesis 12c for average errors. Due to the number of participants with missing GPA data, these analyses were conducted on the full sample without including GPA as a covariate, and became nonsignificant when not controlling for GPA ($\beta = .13, p = .14$).

Hypothesis 12d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no significant negative display rule by negative affectivity interaction in predicting emotion-display ($\beta = -.07, p = .39$), emotion-rule ($\beta = .01, p = .94$), or emotional dissonance ($\beta = -.03, p = .68$). Thus hypothesis 12d was not supported.
Hypotheses 13a-d was that negative affectivity moderates the effect of positive display rules on outcomes, such that the effect of positive display rules on outcomes is weaker when negative affectivity is high compared to when it is low. Hypothesis 13a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant positive display rule by negative affectivity interaction in predicting grip time 2 ($\beta = -.06, p = .31$) or Grip Time difference ($\beta = -.06, p = .50$). Thus hypothesis 13a was not supported. No positive display rule by negative affectivity interaction was found ($\beta = -.02, p = .82$) for momentary emotional exhaustion, failing to provide support for hypothesis 13b.
Hypothesis 13c was tested using average task errors as an outcome variable and controlling for cumulative undergraduate GPA. There was no significant interaction in predicting average task errors ($\beta = -.08, p = .37$). Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate. When this was done, the interaction in remained nonsignificant ($\beta = -.14, p = .11$). Thus hypothesis 13c was not supported.

Hypothesis 13d was tested several ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was a marginally significant positive display rule by negative affectivity interaction in predicting emotion-display dissonance ($\beta = -.14, p = .07$). To further understand the nature of this interaction, I calculated the simple slopes of the interactions (Aiken & West, 1991; Preacher et al., 2006) (See Figure 12). The relationship between positive display rules and emotion-rule dissonance was negative, but the slope was not significantly different from zero for individuals low in negative affectivity (slope = -0.20, $p = .64$). The relationship between positive display rules and emotion-rule dissonance was positive for individuals high in negative affectivity and the slope was significantly different from zero (slope = .45, $p < .05$). Thus, the effect of positive display rules on emotion-display dissonance was stronger for individuals high in negative affectivity than low in negative affectivity. This pattern of results does not support hypothesis 13d for emotion-display dissonance. There was no significant positive display rule by negative affectivity interaction in predicting emotion-rule dissonance ($\beta = -.02, p = .83$), or emotional dissonance ($\beta = -.09, p = .28$). Thus hypothesis 13d was not supported.
Figure 12. Interaction of positive display rules and negative affectivity on emotion-display dissonance.

**Negative Affectivity and Positive and Negative Display Rules**

Hypothesis 15a-d predicted a three-way interaction between positive display rules, negative display rules, and negative affectivity in predicting outcomes, such that the effect of negative display rules will be weaker when positive display rules are present than when they are absent and when negative affectivity is high compared to which it is low. Hypothesis 15a was tested two ways, using grip time 2 (controlling for grip time 1) and grip time difference as outcome variables. There was no significant three-way interaction in predicting grip time 2 ($\beta = .09, p = .13$) but there was a marginally significant three-way interaction for grip time difference ($\beta = .16, p = .09$) (See Figure 13). As with all the analyses in this chapter, this three-way interaction was examined
with only the participants who completed three calls, however, the pattern of results and significance of the interact did not change.

For a more specific test of my hypotheses, I conducted simple slopes analyses (Aiken & West, 1991; Preacher et al., 2006). For participants low in negative affectivity, the effect of negative display rules on grip time difference was positive when positive
display rules were present, however this slope was not significantly different from zero (slope = 2.71, \( p = .80 \)). The effect of negative display rules on grip time difference was negative when positive display rules were absent but this slope was not significantly different from zero (slope = -14.40, \( p = .19 \)).

For participants high in negative affectivity, the effect of negative display rules on grip time difference was positive when positive display rules were present, however this slope was not significantly different from zero (slope = 12.97, \( p = .51 \)). The effect of negative display rules on grip time difference was negative when positive display rules were absent but this slope was not significantly different from zero (slope = -27.85, \( p = .16 \)). Taken together, the effect of negative display rules on grip time difference was negative when positive display rules were absent. This suggests that the presence of negative display rules lead to greater resource depletion than the absence of negative display rules when positive display rules were absent, this effect was stronger for individuals with high in negative affectivity than low in negative affectivity. This provides partial support for Hypothesis 15a. Contrary to predictions, the relationship between negative display rules and grip time difference was positive when positive display rules were present. This suggests that when positive display rules were present, the presence of negative display rules lead to less resource depletion than when negative display rules were absent. Further, this effect was more pronounced for individuals high in negative affectivity than low in negative affectivity. Thus, hypothesis 15a was only partially supported. To aid in interpretation, analyses were conducted with positive display rules as the predictor and negative display rules as the moderator. This three-way interaction is plotted in Figure 14.
As shown, for participants low in negative affectivity, the effect of positive display rules on resource depletion was positive when negative display rules were present but this slope was not significantly different from zero (slope = 5.78, \( p = .59 \)). The effect of positive display rules on resource depletion was negative when negative display rules were absent, and this slope was not significantly different from zero (slope = -11.33, \( p = .30 \)). For participants high in negative affectivity, the effect of positive display rules on resource depletion was positive when negative display rules were present but this slope...
was not significantly different from zero (slope = 27.59, \( p = .17 \)). The effect of positive display rules on resource depletion was negative when negative display rules were absent, and this slope was not significantly different from zero (slope = -13.23, \( p = .50 \)). Further, this effect was more pronounced for individuals high in negative affectivity than low in negative affectivity.

No three-way interaction was found (\( \beta = .01, p = .94 \)) for emotional exhaustion, failing to provide support for hypothesis 15b. Hypothesis 15c was tested using average task errors as an outcome variable and controlling for cumulative undergraduate GPA. There was no significant three-way interaction in predicting average errors (\( \beta = -.03, p = .76 \)). Thus hypothesis 15c was not supported controlling for undergraduate GPA. Due to the number of participants with missing GPA data, these analyses were conducted without including GPA as a covariate, however this did not change the results of the analyses, again failing to provide support for hypothesis 15c (\( \beta = -.08, p = .38 \)).

Hypothesis 15d was tested three ways, using emotion-display dissonance, emotion-rule dissonance, and combined emotional dissonance as outcome variables. There was no three-way interaction in predicting emotion-display dissonance (\( \beta = -.02, p = .85 \)), emotion-rule dissonance (\( \beta = .01, p = .95 \)), or emotional dissonance (\( \beta = -.01, p = .96 \)). Thus hypothesis 15d was not supported.

Alternative Explanations of Self-Regulatory Resource Depletion Measures

Consistent with many self-regulatory resource depletion studies, I assessed participant’s mood during and after completing the self-regulatory task to rule out mood-related explanations (Baumeister et al., 1998; Converse & DeShon, 2009; Moller et al., 2006; Vohs & Heatherton, 2000). I also measured effort, difficulty, and fatigue
experienced during the two experimental tasks (call center task and post experimental handgrip task) to ensure that any differences on the persistence measure are not attributable to these factors (Converse & DeShon, 2009).

Mood State During Experiment

In order to examine whether display rules had an impact on the actual emotions that participants felt during the experiment, I examined whether participants’ experiences of emotions differed across conditions by conducting one-way ANOVAs. These one-way ANOVAs failed to detect any significant differences in high positive, high activation emotions \([F(3,139) = .72, p = .54]\), high positive, low activation emotions \([F(3,139) = .90, p = .44]\), low positive, high activation emotions \([F(3, 139) = .35, p = .79]\), or low positive, low activation emotions \([F(3, 139) = .30]\). Further, no differences between conditions emerged across the positive emotions scale \([F(3, 139) = .09, p = .96]\) or across the negative emotions scale \([F(3, 139) = .51, p = .67]\). However, because some of the scales exhibited poor internal consistency reliability, I examined whether any differences emerged in specific experienced emotions across conditions, again by conducting one-way ANOVAs. There were no differences across conditions in the experience of excitement \([F(3, 139) = .24, p = .87]\), enthusiasm \([F(3, 139) = 1.22, p = .30]\), calmness \([F(3, 139) = 1.27, p = .29]\), satisfaction \([F(3, 139) = .53, p = .66]\), anger \([F(3, 139) = .62, p = .61]\), depression \([F(3, 139) = .28, p = .84]\), or boredom \([F(3, 139) = 1.40, p = .25]\). The one-way ANOVA test detected a marginally significant effect of condition for anxiety \([F(3, 139) = 2.47, p = .07]\), however post hoc Tukey HSD tests failed to detect any significant mean differences across conditions for anxiety. Thus, it appears that none of
the participants differed across conditions with regards to the emotions they experienced during the simulation.

In order to examine the types of emotions that participants expressed and suppressed during the call center simulation, at the end of the call center simulation I asked participants to indicate whether they expressed or suppressed any emotions during their calls. If they indicated that they did have to suppress or express any emotions during the call center task, I asked them to list the types of emotions. With regards to expression, there appeared to be four thematic types of emotions that participants reported expressing during the calls. These were categorized by (1) empathy/concern (e.g., empathy, understanding, concern) with regards to customer’s problems which was reported by 13% of the sample (4 participants in control condition, 5 participants in positive display rule condition, 6 participants in negative display rule condition, 4 participants in integrative display rule condition), (2) positive emotions (e.g., enthusiasm, happiness, cheerful, nice) which was reported by 54% of the sample (13 participants in control condition, 22 participants in positive display rule condition, 21 participants in negative display rule condition, 21 participants in integrative display rule condition), (3) negative emotions (e.g., anger, irritation, frustration) which were reported by 6% of the sample (4 participants in control condition, 1 participant in positive display rule condition, 2 participants in negative display rule condition, 2 participants in integrative display rule condition), and (4) anxiety/nervousness which was reported by 13% of the sample (7 participants in control condition, 7 participants in positive display rule condition, 1 participant in negative display rule condition, 4 participants in integrative display rule condition).
display rule condition). Twenty-five percent of the sample did not report expressing any types of emotions during the call.

With regards to the suppression of emotions during the call, there appeared to be three thematic types of emotions that participants reported suppressing during the calls. These were categorized by (1) negative emotions (e.g., anger, irritation, frustration, annoyance) which was reported by 49% of the sample (17 participants in control condition, 17 participants in positive display rule condition, 16 participants in negative display rule condition, 20 participants in integrative display rule condition), (2) humor/amusement (e.g., humor, sarcasm, amusement) which was reported by five percent of the sample (2 participants in control condition, no participants in positive display rule condition, 3 participants in negative display rule condition, 2 participants in integrative display rule condition), and (3) anxiety/nervousness which was reported by 15% of the sample (5 participants in control condition, 7 participants in positive display rule condition, 2 participants in negative display rule condition, 8 participants in integrative display rule condition). Thirty-nine percent of the sample did not report suppressing any types of emotions during the call.

Taken together, the self-reported emotions that participants suppress and/or expressed during the call center simulation are consistent with the display rule requirements. These reports also indicate that the call center simulation was actually evoking certain emotions that participants had to suppress and/or express. Thus, by having participants interact with difficult customers, the experiment was successful in evoking emotions that were inconsistent with display rules and that required participants to express and suppress certain emotions. It is important to note that participants
frequently reported feeling anxious during this call center simulation which was consistent with comments participants made to the primary research before and after the call center simulation. Interestingly, many participants also reported having to be empathetic and understanding to customers’ concerns and problems which is not traditionally thought of as a positive or negative emotion. Finally, it is also interesting that some participants reported experiencing humor or amusement during the call.

Mood State After Experiment.

A one-way ANOVA on the two mood BMIS subscales indicated that the four display rule conditions did not differ in either valence of mood (pleasant versus unpleasant) \[ F(3, 137) = 2.04, \ p = .11 \] or arousal at the end of the experiment \[ F(3, 137) = 1.41, \ p = .24 \]. Thus any difference in self-regulation performance or any other outcome variables between the groups was not due to difference in emotional state or arousal.

Fatigue, Effort, Difficulty.

One-way ANOVAs on fatigue, effort, and difficulty indicated that the four display rule conditions did not differ in the amount of experienced fatigue \[ F(3, 138) = 1.07, \ p = .36 \], exerted effort \[ F(3,138) = .77, \ p = .52 \], or perceived difficulty \[ F(3, 138) = .94, \ p = .42 \] in completing the call center and hand grip tasks at the end of the experiment. Thus, any difference in the outcome variables across conditions was not due to differences in the amount of fatigue experienced, effort exerted, or perceived difficulty of the tasks.
Exploratory Analyses

Several sets of exploratory analyses were conducted to determine whether display rules had a direct effect on the emotion regulation strategies individuals used to comply with display rules and whether these regulation strategies mediated the effect of display rules on outcomes. Additional exploratory analyses were also conducted to determine whether emotional dissonance is a more proximal outcome of display rules than the other outcomes examined in this study. The results of these analyses are described in more detail below.

Display Rules and Emotion Regulation Strategies

Exploratory analyses were conducted to examine whether the display rule conditions predicted emotional regulation strategies. This was done by conducting four 2(positive display rules: absent, present) x 2(negative display rules: absent, present) between subjects factor ANCOVAs with the following emotion regulation strategies - suppression of felt emotions, faking unfelt emotions, deep acting, and expression of naturally felt emotions as the dependent variables. Cognitive change was dropped from analyses because it exhibited poor reliability. Service orientation, age, and gender were entered as covariates. A summary of these analyses including the means and standard deviations of the positive versus negative display rules absent and present conditions are listed in Table 13. All analyses were run with and without the seven participants that only completed two calls due to technical problems with the Skype software and internet. However, the results did not change as a result of including or removing the seven participants in the analyses. Therefore, the seven participants were included in the analyses which are reported in this section.
Table 13. Analysis of Covariance (ANCOVA) Results for Emotion Regulation Strategies

<table>
<thead>
<tr>
<th>Emotion Regulation Strategy</th>
<th>Presence of DR</th>
<th>Positive DR M (SD)</th>
<th>Negative DR M (SD)</th>
<th>Positive DR X Negative DR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absent</td>
<td>Present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>3.17 (1.04)</td>
<td>3.39 (.97)</td>
<td>3.01 (.94)</td>
<td>3.53 (1.01)</td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>3.06 (1.10)</td>
<td>3.39 (1.07)</td>
<td>3.07 (1.04)</td>
<td>3.39 (1.13)</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>3.54 (.86)</td>
<td>3.80 (.91)</td>
<td>3.64 (.87)</td>
<td>3.70 (.92)</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>2.99 (.93)</td>
<td>3.12 (1.01)</td>
<td>3.19 (.85)</td>
<td>2.92 (1.06)</td>
</tr>
</tbody>
</table>

Note. DR = Display Rules. \( F(1, 136) \). Standard deviations are reported in parentheses. All analyses control for service orientation, age, and gender.

\( ^* p < .10, \ ^* p < .05, \ ^{**} p < .01 \).

**Suppression of Felt Emotion**

There was a significant main effect of positive display rules on the suppression of felt emotions regulation strategy \( F(1, 136) = 3.28, p = .05, \ partial eta^2 = .03 \) revealing that participants with positive display rule requirements \( M = 3.39 \) reported engaging in more suppression of felt emotion than participants without this display rule requirement \( M = 3.17 \). There was also a significant main effect of negative display rules on the suppression of felt emotions regulation strategy \( F(1, 136) = 10.27, p < .01, \ partial eta^2 = .07 \) revealing that participants with negative display rule requirements \( M = 3.53 \) engaged in more suppression of felt emotion than participants without this display rule requirement \( M = 3.01 \). There was no significant interaction between positive and negative display rule requirements in predicting the suppression of felt emotions \( F(1, 136) = .37, p = .54, \ partial eta^2 = .003 \).
Faking Unfelt Emotion

There was a significant main effect of positive display rules on the emotion regulation strategy of faking unfelt emotions \[F(1, 136) = 6.49, p < .01, \text{partial } \eta^2 = .05\] revealing that participants with display rules to express positive emotions \(M = 3.39\) reported faking unfelt emotions more than participants without this display rule requirement \(M = 3.06\). There was a marginally significant effect of negative display rules \[F(1, 136) = 3.10, p = .08, \text{partial } \eta^2 = .02\] revealing that participants with requirements to suppress negative emotions \(M = 3.39\) faked more unfelt emotions than participants without this display rule requirement \(M = 3.07\). There was no interactive effect between positive and negative display rule requirements in predicting the suppression of felt emotions \[F(1, 136) = .85, p = .36, \text{partial } \eta^2 = .01\].

Deep Acting

There was no effect of positive display rules \[F(1, 136) = 2.48, p = .12, \text{partial } \eta^2 = .018\] or negative display rules \[F(1, 136) = .07, p = .79, \text{partial } \eta^2 = .001\] on deep acting regulation strategies. There was however, a significant positive \(\times\) negative display rule interaction \[F(1, 136) = 7.84, p < .01, \text{partial } \eta^2 = .055\]. As shown in Figure 15, when negative display rules were absent there was a significant effect of positive display rules on deep acting \([t(69) = -3.62, p < .01]\) which indicates that when negative display rules are absent, participants engaged in significantly more deep acting when positive display rules were present \(M = 3.98\) then when they were absent \(M = 3.29\). Stated differently, participants with positive display rules engaged in significantly more deep acting than participants in the control condition, who did not have specific display rule requirements. There was no effect of positive display rules on deep acting.
when negative display rules were present \( t(70) = .75, p = .46 \). Thus participants with negative display rules only \((M = 3.78)\) are no different from participant with both positive and negative display rules \((M = 3.62)\). There was a significant effect of negative display rules when positive display rules were present \[t(68) = -2.45, p = .02\]. Participants with negative display rules only \((M = 3.78)\) engaged in significantly more deep acting than participants in the control condition \((M = 3.29)\).

There was a marginally significant effect of negative display rules when positive display rules were present \(t(71) = 1.73, p = .08\). Participants with positive display rules only engaged in more deep acting \((M = 3.98)\) than participants with integrative or both negative and positive display rules requirements \((M = 3.62)\). These results suggests that participants with positive or negative display rule requirements engage in more deep acting than participants in the control or no display rule requirement condition and that

![Figure 15. Interaction of positive display rules and negative display rules on deep acting.](image)
participants with positive display rules engage in more deep acting than participants with both display rule requirements.

*Naturally Felt Emotion*

There was no effect of positive display rules \( F(1, 136) = .07, p = .79, \text{partial } \eta^2 = .001 \) in predicting the expression of naturally felt emotion. There was a marginally significant effect of negative display rules \( F(1, 136) = 2.89, p = .09, \text{partial } \eta^2 = .09 \) on the expression of naturally felt emotion. More specifically, participants without negative display rules \( (M = 3.19) \) reported expressing more naturally felt emotion than participants with negative display rule requirements \( (M = 2.92) \). There was no significant interaction between the negative and positive display rules \( F(1, 136) = 1.01, p = .32, \text{partial } \eta^2 = .007 \) in predicting the expression of naturally felt emotions. Thus, negative but not positive display rules did have an effect on expressing naturally felt emotions.

*Do Emotion Regulation Strategies Mediate the Effect of Display Rules on Outcomes?*

Based on theoretical discussions of emotional labor, some researchers have proposed that emotion regulation strategies may mediate the effects of display rules on individual outcomes (Diefendorff & Gosserand, 2003; Goldberg & Grandey, 2007; Grandey, 2000, 2003). Therefore, one question that could be examined in this study was whether emotion regulation strategies actually do mediate the effects of display rules on outcomes. I examined whether the main effects of negative and positive display rules on outcomes were mediated by emotion regulation strategies, using the SPSS Macro for Multiple Mediation by Preacher and Hayes (2008). This macro enabled me to test all four emotion regulation strategies simultaneously as mediators of the main effects of display

139
rule requirements and outcomes for each analysis. Testing all four emotion regulation strategies as mediators simultaneously provided the most comprehensive assessment of mediation. In addition to testing all of the emotion regulation strategies simultaneously as mediators of display rules and outcomes, I separately tested each emotion regulation strategy as the sole mediator between display rules and regulation strategies. Testing each emotion regulation strategy separately did not change the results of the mediational analyses, therefore, I only reported the results whereby all emotion regulation strategies were entered simultaneously as mediators.

In addition to examining whether the main effects of positive and negative display rules had indirect effects on individual outcomes through emotion regulation strategies, I conducted additional analyses using moderated mediation to determine whether the interaction between positive and negative display rules had indirect effects on outcomes through emotion regulation strategies. I examined the moderated mediational effects of emotion regulation strategies using the SPSS Macro for Moderated Mediation by Hayes (in press; 2012). This macro enabled me to test whether the emotion regulation strategies mediated the effect of the interaction between positive and negative display rules on outcomes.

Using these macros also allowed me to obtain key statistics needed to determine mediation: a bootstrap point estimate of the indirect effect and a 95% bootstrapped bias corrected and accelerated confidence interval (CI) around the point estimate of the indirect effect. For all tests of mediation, the covariates used in prior analyses (described above) were again used here. All analyses were conducted with and without the seven participants that only completed two calls and compared. The results did not change
when the seven participants were excluded from the analyses. Therefore, all analyses reported below include the full sample of participants that passed the manipulation checks.

**Self-Regulatory Resource Depletion**

The mediating effect of the four emotion regulation strategies on negative display rule requirements and self-regulatory resource depletion were examined and summarized in Table 14. These results revealed that none of the four emotion regulation strategies mediated the effects of negative display rule requirements on grip time difference because all of the 95% CIs included zero (See Table 15 for point estimates and confidence intervals). Although the effect of negative display rules on grip time 2 persistence was not significant, it was found that suppressing felt emotions mediated the effect of negative display rule requirements on grip time 2 controlling for grip time 1 (Point Estimate = -2.05, 95% CI = -5.58 to -.39) because the CIs interval around the point estimate did not include zero. When the suppression of felt emotions was tested in a model as the only mediator, the indirect effect of negative display rules on grip time 2 was still significant (Point Estimate = -1.23, 95% CI = -3.71 to .05).

Taken together, this suggests that negative display rules lead to greater suppression of felt emotion which in turn led to less persistence on the hand grip task after the experiment. Thus, there is evidence to suggest that suppressing felt emotions mediated the effects of the negative display rule manipulation on self-regulatory resource depletion. Faking unfelt emotions, deep acting, and expressing naturally felt emotions regulation strategies did not mediate the effects of negative display rule requirements on Grip Time 2 because all of the 95% CIs included zero.
Table 14. Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Self-Regulatory Resource Depletion

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>c path (X → Y)</th>
<th>a path (X → M)</th>
<th>b path (M → Y)</th>
<th>c’ path (X → M → Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative DR Suppress Felt Emotions</td>
<td>Grip Time Diff</td>
<td>-3.95 (3.14)</td>
<td>.49 (.16)**</td>
<td>-3.70 (2.61)</td>
<td>-2.94 (3.25)</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative DR Suppress Felt Emotions</td>
<td>Grip Time 2</td>
<td>-3.72 (2.95)</td>
<td>.49 (.16)**</td>
<td>-4.46 (2.44)^</td>
<td>-2.20 (3.04)</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR Suppress Felt Emotions</td>
<td>Grip Time Diff</td>
<td>2.20 (3.19)</td>
<td>.30 (.16)^</td>
<td>-4.26 (2.55)^</td>
<td>2.24 (3.33)</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR Suppress Felt Emotions</td>
<td>Grip Time 2</td>
<td>1.97 (3.00)</td>
<td>.29 (.15)^</td>
<td>-4.89 (2.38)*</td>
<td>1.94 (3.11)</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All coefficients are unstandardized. DR = Display Rules. Diff = Difference. All analyses controlled for age, gender, and service orientation. Grip Time 1 was controlled for when Grip Time 2 was the outcome. Values are unstandardized beta coefficients; standard errors are in parentheses. ^p < .10 *p < .05 **p < .01.

The mediating effects of the four emotion regulation strategies on the positive display rule requirements and self-regulatory resource depletion relationship were examined and summarized (See Table 14). These results revealed that none of the four emotion regulation strategies mediated the effects of positive display rule requirements on grip time difference because all of the 95% CIs included zero (See Table 15 for point estimates and confidence intervals). Although the effect of positive display rules on grip time 2 was not significant, it was found that positive display rules had a significant
indirect effect on grip time 2 controlling for grip time 1 through the strategy of suppressing felt emotions (Point Estimate = -1.39, 95% CI = -4.49 to -0.03). When suppression of felt emotions was tested as the only mediator, the indirect effect of positive display rules on grip time 2 was still significant (Point Estimate = -0.88, 95% CI = -3.39 to -0.01).

Table 15. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Self-Regulatory Resource Depletion

<table>
<thead>
<tr>
<th></th>
<th>Grip Time Difference</th>
<th></th>
<th>Grip Time 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate</td>
<td>Lower 95% CI</td>
<td>Upper 95% CI</td>
<td>Point Estimate</td>
</tr>
<tr>
<td><strong>Negative Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-0.94 (.10)</td>
<td>-3.44</td>
<td>0.68</td>
<td>-1.40 (1.03)</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>-1.74 (1.33)</td>
<td>-5.13</td>
<td>0.27</td>
<td><strong>-2.05 (1.23)</strong></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>0.49 (.74)</td>
<td>-0.37</td>
<td>2.88</td>
<td>0.63 (.72)</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>0.09 (.51)</td>
<td>-0.76</td>
<td>1.40</td>
<td>0.08 (.47)</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>0.21 (.55)</td>
<td>-0.54</td>
<td>1.95</td>
<td>-0.06 (.50)</td>
</tr>
<tr>
<td><strong>Positive Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-0.13 (1.07)</td>
<td>-2.36</td>
<td>1.95</td>
<td>-0.03 (1.10)</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>-1.22 (1.04)</td>
<td>-4.34</td>
<td>0.05</td>
<td><strong>-1.39 (1.06)</strong></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>0.50 (.84)</td>
<td>-0.69</td>
<td>2.74</td>
<td>0.74 (.82)</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>0.66 (.62)</td>
<td>-0.08</td>
<td>2.62</td>
<td>0.61 (.57)</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>-0.07 (.34)</td>
<td>-1.33</td>
<td>0.35</td>
<td>0.00 (.29)</td>
</tr>
</tbody>
</table>

*Note.* Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). All analyses controlled for age, gender, and service orientation. Grip time 1 was controlled for when grip time 2 was the outcome.

Taken together, this suggests that positive display rules lead to greater suppression of emotion and suppression of emotion lead to less grip time 2 persistence (i.e., greater resource depletion). Thus, there was some evidence to suggest that suppressing felt emotions mediated the effects of positive display rules on self-regulatory
resource depletion. Faking unfelt emotions, deep acting, and expressing naturally felt emotions regulation strategies did not mediate the effects of positive display rule requirements on grip time 2 because all of the 95% CIs included zero.

For the interaction between negative and positive display rules in predicting self-regulatory resource depletion measured as grip time 2 controlling for grip time 1, suppression of felt emotions (Point Estimate = .45, 95% CI = -1.44 to 3.43), faking unfelt emotion (Point Estimate = .33, 95% CI = -.89 to 2.25), deep acting (Point Estimate = -2.00, 95% CI = -5.26 to .22), and naturally felt emotion (Point Estimate = .49, 95% CI = -.87 to 2.48) were not found to be mediators because all of the confidence intervals included zero. The interaction between negative and positive display rules in predicting self-regulatory resource depletion as measured by grip time difference was not mediated by suppression of felt emotions (Point Estimate = .42, 95% CI = -1.03 to 3.05), faking unfelt emotion (Point Estimate = .21, 95% CI = -.95 to 2.05), deep acting (Point Estimate = -1.75, 95% CI = -5.06 to .50), or naturally felt emotion (Point Estimate = .28, 95% CI = -.80 to 2.05) because all of the confidence intervals included zero. Thus, there was no evidence of an indirect effect of the interaction between positive and negative display rules on self-regulatory resource depletion through any of the emotion regulation strategies.

*Emotional Exhaustion*

The mediating effect of the four emotion regulation strategies on negative display rule requirements and task errors were examined and summarized in Table 16. These results revealed that although the effect of negative display rules on emotional exhaustion was not significant, there was an indirect effect of negative emotions on emotional
exhaustion through suppression of felt emotions. (Point Estimate = .25, 95% CI = .07 to .56). Taken together, this suggests that negative display rules led to greater suppression of emotion which led to greater emotional exhaustion. Faking unfelt emotion, deep acting, and expression of natural emotions did not mediate the effects of negative display rule requirements on emotional exhaustion because all of the 95% CIs included zero (See Table 17 for point estimates and confidence intervals).

Table 16. Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Emotional Exhaustion

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>X → Y (c path)</th>
<th>X → M (a path)</th>
<th>M → Y (b path)</th>
<th>X → M → Y (c’ path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative DR</td>
<td>Suppress Felt Emotions</td>
<td>Emo Exhaust</td>
<td>-.07 (.25)</td>
<td>.49 (.16)**</td>
<td>.51 (.20)**</td>
<td>-.34 (.25)</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emotions</td>
<td></td>
<td>.29 (.17)</td>
<td>-.06 (.19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.03 (.15)</td>
<td>.07 (.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emotions</td>
<td></td>
<td>-.26 (.16)</td>
<td>-.13 (.18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR</td>
<td>Suppress Felt Emotions</td>
<td>Emo Exhaust</td>
<td>.28 (.25)</td>
<td>.31 (.16)</td>
<td>.45 (.20)</td>
<td>.16 (.26)</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emotions</td>
<td></td>
<td>.43 (.17)**</td>
<td>-.07 (.20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.23 (.15)</td>
<td>.06 (.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emotions</td>
<td></td>
<td>.04 (.16)</td>
<td>-.15 (.18)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All coefficients are unstandardized. DR = Display Rules. All analyses controlled for age, gender, and service orientation. Values are unstandardized beta coefficients; standard errors are in parentheses. Emo Exhaust = Emotional Exhaustion. ^p < .10, *p < .05, **p < .01.

The mediating effect of the four emotion regulation strategies on the positive display rule and emotional exhaustion relationship were examined and summarized in Table 16. Although the effect of positive display rules on emotional exhaustion was not significant, there was an indirect effect of positive display rules on emotional exhaustion through suppression of felt emotions (Point Estimate = .13, 95% CI = .01 to .40). Taken
together, this suggests that positive display rules lead to greater suppression of felt emotions which lead to greater emotional exhaustion. Faking unfelt emotions, deep acting, and expressing naturally felt emotions regulation strategies did not mediate the effects of positive display rule requirements on emotional exhaustion because all of the 95% CIs included zero (See Table 17 for point estimates and confidence intervals).

Table 17. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Emotional Exhaustion

<table>
<thead>
<tr>
<th></th>
<th>Emotional Exhaustion</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate</td>
<td>Lower 95% CI</td>
<td>Upper 95% CI</td>
</tr>
<tr>
<td><strong>Negative Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.27 (.11)</td>
<td>.09</td>
<td>.51</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>.25 (.12)</td>
<td>.07</td>
<td>.56</td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>-.01 (.07)</td>
<td>-.19</td>
<td>.10</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>.00 (.02)</td>
<td>-.03</td>
<td>.08</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>.04 (.06)</td>
<td>-.04</td>
<td>.24</td>
</tr>
<tr>
<td><strong>Positive Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.10 (.12)</td>
<td>-.09</td>
<td>.39</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>.13 (.09)</td>
<td>.01</td>
<td>.40</td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>-.03 (.10)</td>
<td>-.25</td>
<td>.14</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>.01 (.04)</td>
<td>-.05</td>
<td>.14</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>-.01 (.04)</td>
<td>-.14</td>
<td>.05</td>
</tr>
</tbody>
</table>

*Note. Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). All analyses controlled for age, gender, and service orientation.*

For the interaction between negative and positive display rules in predicting emotional exhaustion, suppression of felt emotions (Point Estimate = -.10, 95% CI = -.50 to .21), faking unfelt emotion (Point Estimate = -.11, 95% CI = -.41 to .12), deep acting (Point Estimate = -.04, 95% CI = -.30 to .21), and naturally felt emotion (Point Estimate = -.12, 95% CI = -.42 to .12) were not found to be mediators because all of the confidence intervals included zero. Thus, there was no evidence of an indirect effect of the interaction between positive and negative display rules on emotional exhaustion through any of the emotion regulation strategies.
Task Errors

The mediating effect of the four emotion regulation strategies on negative display rule requirements and task errors relationship were examined and summarized in Table 18. None of the four emotion regulation strategies mediated the effect of negative display rules on average task errors when controlling for cumulative GPA because all of the 95% CIs included zero (See Table 19 for point estimates and confidence intervals). When not controlling for GPA, faking unfelt emotion (Point Estimate = -.12, 95% CI = -.62 to .05), deep acting (Point Estimate = -.02, 95% CI = -.26 to .15), and naturally felt emotion (Point Estimate = -.02, 95% CI = -.32 to .37) were not mediators because all of the confidence intervals included zero. However, when not controlling for GPA suppressing felt emotions (Point Estimate = .40, 95% CI = .06 to .93) was a mediator of negative display rules on task errors because the confidence interval did not include zero. More specifically, negative display rules lead to greater suppression of felt emotion which led to greater task errors. When the suppression of felt emotions was tested in a model as the only mediator, the indirect effect of negative display rules on task errors was no longer significant (Point Estimate = .21, 95% CI = -.05 to .63). Thus, there is limited evidence to suggest that suppression of felt emotion mediated the effect of negative display rules on task errors.

The mediating effects of the four emotion regulation strategies on the relationship between positive display rule requirements and task errors were examined and are summarized in Table 18. These results revealed that none of the four emotion regulation strategies mediated the effects of positive display rule requirements on average task errors, controlling for GPA, because all of the 95% CIs included zero. The confidence
intervals and point estimates for these equations are displayed in Table 19. When not controlling for GPA, faking unfelt emotion (Point Estimate = -.22, 95% CI = -.85 to .04), deep acting (Point Estimate = -.14, 95% CI = -.48 to .002), and naturally felt emotion (Point Estimate = -.001, 95% CI = -.25 to .15) still were not mediators because all of the confidence intervals included zero. However, when not controlling for GPA suppressing felt emotions (Point Estimate = .22, 95% CI = .01 to .66) was a mediator of positive display rules on task errors because the confidence interval included zero. More specifically, positive display rules led to greater suppression of felt emotion which led to greater task errors. When the suppression of felt emotions was tested in a model as the only mediator, the indirect effect of positive display rules on task errors was no longer significant (Point Estimate = .09, 95% CI = -.04 to .42). Thus, there is limited evidence to suggest that suppression of felt emotion mediated the effect of positive display rules on task errors.

For the interaction between negative and positive display rules in predicting average task errors and controlling for GPA, suppression of felt emotions (Point Estimate = -.01, 95% CI = -.26 to .33), faking unfelt emotion (Point Estimate = -.01, 95% CI = -.25 to .32), deep acting (Point Estimate = .47, 95% CI = -.01 to 1.30), and naturally felt emotion (Point Estimate = -.06, 95% CI = -.42 to .22) were not found to be mediators because all of the confidence intervals included zero. When not controlling for GPA suppression of felt emotions (Point Estimate = -.07, 95% CI = -.45 to .25), faking unfelt emotion (Point Estimate = -.02, 95% CI = -.27 to .27), deep acting (Point Estimate = .45, 95% CI = -.06 to 1.22), and naturally felt emotion (Point Estimate = -.10, 95% CI = -.42 to .20) still were not mediators because all of the confidence intervals included zero.
Thus, there was no evidence of an indirect effect of the interaction between positive and negative display rules on task errors through any of the emotion regulation strategies.

Table 18. Direct Effect and Mediation results for Emotion Regulation Strategies on Display Rules Predicting Task Errors

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>X (\rightarrow) Y (c path)</th>
<th>X (\rightarrow) M (a path)</th>
<th>M (\rightarrow) Y (b path)</th>
<th>X (\rightarrow) M (\rightarrow) Y (c' path)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative DR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>Average Errors</td>
<td>.11 (.44)</td>
<td>.45 (.17)**</td>
<td>.29 (.37)</td>
<td>-.07 (.45)</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td>.11 (.19)</td>
<td>-.14 (.35)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td>-.08 (.17)</td>
<td>-.63 (.26)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td>-.18 (.17)</td>
<td>-.08 (.31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Positive DR</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>Average Errors</td>
<td>.76 (.44)*</td>
<td>.34 (.18)*</td>
<td>.24 (.35)</td>
<td>.89 (.45)*</td>
<td></td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td></td>
<td>.45 (.19)*</td>
<td>-.26 (.35)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Acting</td>
<td></td>
<td>.14 (.17)</td>
<td>-.64 (.25)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td></td>
<td>.01 (.18)</td>
<td>-.18 (.31)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. All coefficients are unstandardized. DR = Display Rules. All analyses controlled for age, gender, service orientation, and cumulative GPA. Values are unstandardized beta coefficients; standard errors are in parentheses.  
\(^p < .10, \ *p < .05, \ **p < .01.\)

Table 19. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Task Errors

<table>
<thead>
<tr>
<th>Task Performance</th>
<th>Point Estimate</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Negative Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.17 (.19)</td>
<td>-.20</td>
<td>.59</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>.13 (.18)</td>
<td>-.19</td>
<td>.57</td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>-.01 (.09)</td>
<td>-.34</td>
<td>.09</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>.04 (.11)</td>
<td>-.14</td>
<td>.36</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>.01 (.14)</td>
<td>-.20</td>
<td>.46</td>
</tr>
<tr>
<td><strong>Positive Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-.09 (.29)</td>
<td>-.85</td>
<td>.34</td>
</tr>
<tr>
<td>Suppress Felt Emotions</td>
<td>.07 (.14)</td>
<td>-.15</td>
<td>.43</td>
</tr>
<tr>
<td>Fake Unfelt Emotions</td>
<td>-.09 (.18)</td>
<td>-.63</td>
<td>.15</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>-.08 (.11)</td>
<td>-.41</td>
<td>.07</td>
</tr>
<tr>
<td>Natural Felt Emotions</td>
<td>.00 (.09)</td>
<td>-.21</td>
<td>.19</td>
</tr>
</tbody>
</table>

*Note. Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). All analyses controlled for age, gender, service orientation, and cumulative GPA.
Emotional Dissonance

The mediating effects of the four emotion regulation strategies on the relationship between negative display rules and emotional dissonance were examined and summarized in Table 20. These results revealed that none of the regulation strategies mediated the effects of negative display rules on emotion-display dissonance, emotion-rule dissonance, or combined emotional dissonance because all of the CIs included zero (See Table 21 for point estimates and confidence intervals). The mediating effect of the four emotion regulation strategies on positive display rule requirements and dissonance were examined and summarized in Table 20. These results revealed that faking unfelt emotions mediated the effect of positive display rules on emotion-display dissonance (Point Estimate = .25, 95% CI = .06 to .50), emotion-rule dissonance (Point Estimate = .16, 95% CI = .04 to .36), and combined emotional dissonance (Point Estimate = .21, 95% CI = .06 to .43).

Taken together, these results suggest that faking unfelt emotions mediates the effect of positive display rules on emotional dissonance. More specifically, positive display rules lead to greater faking of unfelt emotion which leads to greater emotion-display, emotion-rule, and combined emotional dissonance. Suppressing felt emotions, deep acting, and expressing naturally felt emotions regulation strategies did not mediate the effects of positive display rule requirements on emotion-display dissonance, emotion-rule dissonance, or combined emotional dissonance because all of the 95% CIs included zero. Table 21 displays all of the point estimates and confidence intervals for these mediation tests.
Table 20. Direct Effect and Mediation Results for Emotion Regulation Strategies on Display Rules Predicting Emotional Dissonance.

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>X → Y (c path)</th>
<th>X → M (a path)</th>
<th>M → Y (b path)</th>
<th>X → M (c' path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Display</td>
<td>.12 (.19)</td>
<td>.47 (.16)**</td>
<td>.10 (.09)</td>
<td>-.16 (.12)</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.27 (.17)</td>
<td>.65 (.09)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.07 (.14)</td>
<td>.01 (.07)</td>
<td>-.23 (.15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.23 (.15)</td>
<td>-.27 (.08)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Rule</td>
<td>.01 (.17)</td>
<td>.49 (.16)**</td>
<td>.16 (.11)</td>
<td>-.25 (.13)*</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.29 (.17)</td>
<td>.40 (.10)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.03 (.15)</td>
<td>.02 (.08)</td>
<td>-.26 (.16)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.26 (.16)*</td>
<td>-.23 (.10)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Diss</td>
<td>.07 (.17)</td>
<td>.49 (.16)**</td>
<td>.12 (.09)</td>
<td>-.21 (.11)*</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.29 (.17)*</td>
<td>.52 (.09)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.03 (.15)</td>
<td>.04 (.06)</td>
<td>-.26 (.16)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.26 (.16)*</td>
<td>-.25 (.08)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Display</td>
<td>.52 (.18)**</td>
<td>.29 (.16)*</td>
<td>.06 (.09)</td>
<td>.27 (.12)*</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.41 (.17)*</td>
<td>.62 (.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.27 (.14)*</td>
<td>-.01 (.07)</td>
<td>.07 (.16)</td>
<td>-.30 (.08)</td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.07 (.16)</td>
<td>-.30 (.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Rule</td>
<td>.43 (.17)**</td>
<td>.31 (.16)*</td>
<td>.11 (.10)</td>
<td>.24 (.13)*</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.43 (.17)**</td>
<td>.38 (.10)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.23 (.15)</td>
<td>.01 (.08)</td>
<td>.04 (.16)</td>
<td>-.26 (.10)**</td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.23 (.15)</td>
<td>-.26 (.10)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive DR</td>
<td>Suppress Felt Emos</td>
<td>Emo-Diss</td>
<td>.47 (.16)**</td>
<td>.31 (.16)*</td>
<td>.08 (.09)</td>
<td>.24 (.11)*</td>
</tr>
<tr>
<td></td>
<td>Fake Unfelt Emos</td>
<td></td>
<td>.43 (.17)**</td>
<td>.49 (.09)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deep Acting</td>
<td></td>
<td>.23 (.15)</td>
<td>.03 (.06)</td>
<td>.04 (.16)</td>
<td>-.27 (.08)**</td>
</tr>
<tr>
<td></td>
<td>Natural Felt Emos</td>
<td></td>
<td>-.23 (.15)</td>
<td>-.27 (.08)**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* All coefficients are unstandardized. DR = Display Rules. Diss = Dissonance. Emos = Emotions. Emo = Emotional. All analyses controlled for age, gender, and service orientation. Values are unstandardized beta coefficients; standard errors are in parentheses. *p < .10, *p < .05, **p < .01.
Table 21. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Display Rules with Emotion Regulation Strategies as the Mediators on Emotional Dissonance

<table>
<thead>
<tr>
<th></th>
<th>Emotion-Display Dissonance</th>
<th>Emotion-Rule Dissonance</th>
<th>Emotional Dissonance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate</td>
<td>Lower 95% CI</td>
<td>Upper 95% CI</td>
</tr>
<tr>
<td><strong>Negative Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.29 (.15)</td>
<td>-.01</td>
<td>.58</td>
</tr>
<tr>
<td>Suppress Felt Emos</td>
<td>.04 (.06)</td>
<td>-.05</td>
<td>.19</td>
</tr>
<tr>
<td>Fake Unfelt Emos</td>
<td>.18 (.12)</td>
<td>-.03</td>
<td>.43</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>.00 (.01)</td>
<td>-.02</td>
<td>.03</td>
</tr>
<tr>
<td>Natural Felt Emos</td>
<td>.06 (.05)</td>
<td>-.01</td>
<td>.18</td>
</tr>
<tr>
<td><strong>Positive Display Rules</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.25 (.15)</td>
<td>-.04</td>
<td>.55</td>
</tr>
<tr>
<td>Suppress Felt Emos</td>
<td>.02 (.04)</td>
<td>-.04</td>
<td>.13</td>
</tr>
<tr>
<td>Fake Unfelt Emos</td>
<td>.25 (.11)</td>
<td>.06</td>
<td>.50</td>
</tr>
<tr>
<td>Deep Acting</td>
<td>-.01 (.02)</td>
<td>-.05</td>
<td>.04</td>
</tr>
<tr>
<td>Natural Felt Emos</td>
<td>-.02 (.05)</td>
<td>-.12</td>
<td>.07</td>
</tr>
</tbody>
</table>

Note. Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). All analyses controlled for age, gender, and service orientation. Cog = Cognitive, Emos = Emotions.

For the interaction between negative and positive display rules in predicting emotion-display dissonance, suppression of felt emotions (Point Estimate = -.17, 95% CI = -.65 to .29), faking unfelt emotion (Point Estimate = -.30, 95% CI = -.88 to .28), deep acting (Point Estimate = .01, 95% CI = -.19 to .21), and naturally felt emotion (Point Estimate = -.30, 95% CI = -.79 to .18) were not found to be mediators because all of the confidence intervals included zero. For the interaction between negative and positive display rules in predicting emotion-rule dissonance, suppression of felt emotions (Point Estimate = -.11, 95% CI = -.49 to .25), faking unfelt emotion (Point Estimate = -.19, 95% CI = -.61 to .23), deep acting (Point Estimate = .05, 95% CI = -.14 to .24), and naturally felt emotion (Point Estimate = -.19, 95% CI = -.57 to .19) were not found to be mediators because all of the confidence intervals included zero. For the interaction between negative and positive display rules in predicting combined emotional dissonance, suppression of felt emotions (Point Estimate = -.12, 95% CI = -.56 to .27), faking unfelt emotion (Point Estimate = -.22, 95% CI = -.72 to .28), deep acting (Point Estimate = .03, 95% CI = -.17 to .21), and naturally felt emotion (Point Estimate = -.21, 95% CI = -.64 to .
.21) were not found to be mediators because all of the confidence intervals included zero. Thus, there was no evidence that the any of the emotion regulation strategies mediated the effect of the interaction of positive and negative display rules on emotional dissonance.

Does Emotional Dissonance Mediate the Effect of Display Rules on Other Outcomes?

Although the present study was primarily interested in examining emotional dissonance as an outcome of display rules, empirical research and theoretical discussion of emotional dissonance have suggested that emotional dissonance may be a more proximal outcome of emotional job demands than other outcomes in understanding the emotional labor process (e.g., Bakker & Heuven, 2006). Thus, another question that could be addressed by this study was whether emotional dissonance is a more proximal outcome of display rules than is self-regulatory resource depletion, emotional exhaustion, and task errors. I examined the meditational effects of emotional dissonance, again, using the SPSS Macros for Multiple Mediation by Preacher and Hayes (2008).

These macros enabled me to test emotion-display dissonance and emotion-rule dissonance simultaneously as mediators of display rule requirements on the other outcome variables. I also used these macros to test the combined emotional dissonance as mediators of display rules and outcomes. Using these macros also enabled me to obtain key statistics needed to determine mediation: a bootstrap point estimate of the indirect effect and a 95% bootstrapped bias corrected confidence interval (CI) around the point estimate of the indirect effect. All analyses were conducted with and without the seven participants that did not complete a third call. These analyses found that the results
did not change when the seven participants were excluded from the analyses. Thus, the seven participants were included in the analyses reported below.

**Negative Display Rules**

The mediating effect of emotion-display dissonance and emotion-rule dissonance on negative display rule requirements and self-regulatory resource depletion, emotional exhaustion and task errors were examined and summarized in Table 22. See Table 23 for a summary of all point estimates and 95% confidence intervals. Emotion-display dissonance was not a mediator of persistence measured as grip time difference (Point Estimate = .18, 95% CI = -.31 to 2.09) or as grip time 2 (Point Estimate = .19, 95% CI = -.32 to 2.17) because the 95% CIs included zero. This analysis also showed that emotion-rule dissonance was not a mediator of persistence measured as the grip time difference (Point Estimate = .05, 95% CI = -.76 to 1.11) or as grip time 2 (Point Estimate = .05, 95% CI = -.99 to 1.16) because the 95% CI included zero.

Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediation between negative display rules and self-regulatory resource depletion. This analysis found that the combined emotional dissonance was not a mediator of negative display rules on grip time difference (Point Estimate = .02, 95% CI = -.55 to .51) or grip time 2 (Point Estimate = -.02, 95% CI = -.96 to .28) because the 95% CIs included zero.

Neither emotion-display dissonance nor emotion-rule dissonance mediated the effect of negative display rules on emotional exhaustion (Point Estimate = .03, 95% CI = -.04 to .20; Point Estimate = .01, 95% CI = -.12 to .14). Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediation between
negative display rules and emotional exhaustion. This analysis found that the combined emotional dissonance was not a mediator of negative display rules on emotional exhaustion (Point Estimate = .04, 95% CI = -.13 to .23) because the 95% CIs included zero.

Table 22. Direct Effect and Mediation Results for Emotional Dissonance on Negative Display Rules Predicting Outcomes

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>X → Y (c path)</th>
<th>X → M (a path)</th>
<th>M → Y (b path)</th>
<th>X → M → Y (c’ path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative DR</td>
<td>Emo-display dissonance</td>
<td>Grip Time Difference</td>
<td>-3.99 (3.16)</td>
<td>.12 (.19)</td>
<td>1.32 (2.28)</td>
<td>-4.16 (3.19)</td>
</tr>
<tr>
<td></td>
<td>Emo-Rule Dissonance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>Grip Time 2</td>
<td>-3.69 (2.97)</td>
<td>.12 (.19)</td>
<td>1.24 (2.14)</td>
<td>-3.85 (3.00)</td>
<td></td>
</tr>
<tr>
<td>Emo-Rule Dissonance</td>
<td></td>
<td>-.00 (.17)</td>
<td></td>
<td></td>
<td>-2.17 (2.38)</td>
<td></td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>Emo Exhaust</td>
<td>-.05 (.25)</td>
<td>.12 (.19)</td>
<td>.20 (.17)</td>
<td>-.08 (.24)</td>
<td></td>
</tr>
<tr>
<td>Emo-Rule Dissonance</td>
<td>Mean Errors</td>
<td>.06 (.44)</td>
<td>.01 (.17)</td>
<td>.31 (.19)</td>
<td>-.08 (.32)</td>
<td>.14 (.44)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.19 (.18)</td>
<td></td>
<td>-.07 (.20)</td>
<td></td>
<td>.45 (.35)</td>
</tr>
</tbody>
</table>

Note. All coefficients are unstandardized. DR = Display Rules. Emo = Emotion, Emo Exhaust = Emotional Exhaustion. All analyses controlled for age, gender, and service orientation. Grip time 1 was controlled when grip time 2 was the outcome. Cumulative GPA was included as a control variable when errors were outcomes. Values are unstandardized beta coefficients; standard errors are in parentheses. *p < .10, *p < .05, **p < .01.

Finally, controlling for GPA, emotion-display dissonance and emotion-rule dissonance did not mediate the effect of negative display rules on average task errors (Point Estimate = -.02, 95% CI = -.26 to .06; Point Estimate = .01, 95% CI = -.43 to .14). Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediation between negative display rules and task performance. This analysis found that the combined emotional dissonance was not a mediator of negative display rules on average task errors (Point Estimate = .03, 95% CI = -.27 to .04) because the 95%
CIs included zero. When these analyses were conducted without controlling for GPA, emotion-display (Point Estimate = -.02, 95% CI = -.28 to .06), emotion-rule (Point Estimate = .02, 95% CI = -.14 to .13), or combined emotional dissonance (Point Estimate = .02, 95% CI = -.05 to .20) still did not mediate the effect of negative display rules on average task errors. Taken together, emotion-display, emotion-rule, or combined emotional dissonance did not mediated the effect of negative display rules on self-regulatory resource depletion, emotional exhaustion, or performance.

Table 23. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Negative Display Rules with Emotional Dissonance as the Mediators on Outcomes

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Point Estimate</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulatory Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grip Time Difference</td>
<td>.23 (.44)</td>
<td>-.44</td>
<td>1.37</td>
</tr>
<tr>
<td>Total</td>
<td>.18 (.48)</td>
<td>-.31</td>
<td>2.09</td>
</tr>
<tr>
<td>Emotion-display dissonance</td>
<td>.05 (.43)</td>
<td>-.76</td>
<td>1.11</td>
</tr>
<tr>
<td>Emotion-rule dissonance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grip Time 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.24 (.49)</td>
<td>-.50</td>
<td>1.55</td>
</tr>
<tr>
<td>Emotion-display dissonance</td>
<td>.19 (.51)</td>
<td>-.32</td>
<td>2.17</td>
</tr>
<tr>
<td>Emotion-rule dissonance</td>
<td>.05 (.51)</td>
<td>-.99</td>
<td>1.16</td>
</tr>
<tr>
<td><strong>Emotional Exhaustion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.04 (.09)</td>
<td>-.14</td>
<td>.22</td>
</tr>
<tr>
<td>Emotion-display dissonance</td>
<td>.03 (.05)</td>
<td>-.04</td>
<td>.20</td>
</tr>
<tr>
<td>Emotion-rule dissonance</td>
<td>.01 (.06)</td>
<td>-.12</td>
<td>.14</td>
</tr>
<tr>
<td><strong>Task Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Task Errors</td>
<td>-.07 (.09)</td>
<td>-.32</td>
<td>.06</td>
</tr>
<tr>
<td>Total</td>
<td>.01 (.07)</td>
<td>-.09</td>
<td>.23</td>
</tr>
<tr>
<td>Emotion-display dissonance</td>
<td>-.07 (.10)</td>
<td>-.46</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Note.* Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). All analyses controlled for age, gender, and service orientation. Grip time 1 was controlled when grip time 2 was the outcome. Cumulative GPA was included as a control variable when errors were outcomes.

**Positive Display Rules**

The mediating effect of emotion-display dissonance and emotion-rule dissonance on positive display rule requirements and self-regulatory resource depletion, emotional exhaustion and task errors were examined and summarized in Table 24. The results show...
that emotion-display dissonance was not a mediator of persistence measured the grip time difference (Point Estimate = -.48, 95% CI = -2.81 to 1.23) or as grip time 2 (Point Estimate = .46, 95% CI = -1.30 to 2.76) because the 95% CI included zero. This analysis also showed that emotion-rule dissonance was not a mediator of persistence measured as the grip time difference (Point Estimate = .65, 95% CI = -.86 to 3.30) or as grip time 2 (Point Estimate = -.91, 95% CI = -3.89 to .49) because the 95% CI included zero.

Table 24. Direct Effect and Mediation Results for Emotional Dissonance on Positive Display Rules Predicting Outcomes

<table>
<thead>
<tr>
<th>Independent Variable (X)</th>
<th>Mediating Variable (M)</th>
<th>Dependent Variable (Y)</th>
<th>X → Y (c path)</th>
<th>X → M (a path)</th>
<th>M → Y (b path)</th>
<th>X → M → Y (c' path)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive DR</td>
<td>Emo-display dissonance</td>
<td>Grip Time Difference</td>
<td>2.20 (3.21)</td>
<td>.51 (.18)**</td>
<td>.87 (2.30)</td>
<td>2.31 (3.32)</td>
</tr>
<tr>
<td></td>
<td>Emo-rule Dissonance</td>
<td></td>
<td></td>
<td>.42 (.17)**</td>
<td>-1.34 (2.53)</td>
<td></td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>Grip Time 2</td>
<td>2.03 (3.02)</td>
<td>.51** (.18)</td>
<td>.80 (2.16)</td>
<td>2.46 (3.12)</td>
<td></td>
</tr>
<tr>
<td>Emo-rule Dissonance</td>
<td></td>
<td></td>
<td></td>
<td>.41* (.17)</td>
<td>-2.04 (2.38)</td>
<td></td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>Emotional Exhaustion</td>
<td>.30 (.25)</td>
<td>.52** (.18)</td>
<td>.20 (.17)</td>
<td>.06 (.25)</td>
<td></td>
</tr>
<tr>
<td>Emo-rule Dissonance</td>
<td>Mean Errors</td>
<td>.71</td>
<td>.54** (.20)</td>
<td>-.14 (.32)</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.42* (.18)</td>
<td>.42 (.34)</td>
<td></td>
</tr>
</tbody>
</table>

Note. All coefficients are unstandardized. DR = Display Rules. Diff = Difference. Emo Exhaust = Emotion. All analyses controlled for age, gender, and service orientation. Grip time 1 was controlled when grip time 2 was the outcome. GPA was included as a control when errors were outcomes. Values are unstandardized beta coefficients; standard errors are in parentheses. ^p < .10, *p < .05, **p < .01.

Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediator between positive display rules and self-regulatory resources. This analysis found that the combined emotional dissonance was not a mediator of positive display rules on grip time persistence difference (Point Estimate = -
158

.21, 95% CI = -2.05 to 1.13) or grip time 2 (Point Estimate = -.51, 95% CI = -2.67 to .66) because the 95% CIs included zero.

Neither emotion-display dissonance nor emotion-rule dissonance mediated the effect of positive display rules on emotional exhaustion (Point Estimate = .10, 95% CI = -.03 to .36; Point Estimate = .14, 95% CI = -.078 to .39). Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediator between positive display rules and emotional exhaustion. Although the effect of positive display rules on emotional exhaustion was not significant, there was an indirect effect of positive display rules on emotional exhaustion through combined emotional dissonance (Point Estimate = .24, 95% CI = .07 to .51). Thus, there is some evidence that emotional dissonance mediates the effect of positive display rules on emotional exhaustion. More specifically, positive display rules lead to greater emotional dissonance which led to greater emotional exhaustion.

Finally, emotion-display dissonance and emotion-rule dissonance did not mediate the effect of positive display rules average task errors when controlling for GPA (Point Estimate = -.10, 95% CI = -.48 to .16; Point Estimate = .16, 95% CI = -.04 to .57). See Table 25 for a summary of all point estimates and 95% intervals. Separate meditational analyses were conducted using the combined emotional dissonance scale as the mediation between positive display rules and task performance. This analysis found that the combined emotional dissonance was not a mediator of positive display rules on average errors (Point Estimate = .12, 95% CI = -.06 to .51) because the 95% CIs included zero. When these analyses were conducted without controlling for GPA, emotion-display (Point Estimate = -.10, 95% CI = -.50 to .14), emotion-rule (Point Estimate = .16, 95% CI
= -.03 to .59), or combined emotional dissonance (Point Estimate = .07, 95% CI = -.12 to .38) still did not mediate the effect of positive display rules on average task errors.

Table 25. Point Estimates and Confidence Intervals of the Multiple Mediation Effects of Positive Display Rules with Emotional Dissonance as the Mediators on Outcomes

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Point Estimate</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulatory Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grip Time Difference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-.18 (.83)</td>
<td>-1.97</td>
<td>1.40</td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>.45 (.95)</td>
<td>-1.18</td>
<td>2.80</td>
</tr>
<tr>
<td>Emo-rule dissonance</td>
<td>-.56 (1.00)</td>
<td>-3.40</td>
<td>.82</td>
</tr>
<tr>
<td>Grip Time 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>-.45 (.85)</td>
<td>-2.56</td>
<td>.95</td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>.46 (.99)</td>
<td>-1.30</td>
<td>2.76</td>
</tr>
<tr>
<td>Emo-rule dissonance</td>
<td>-.91 (1.04)</td>
<td>-3.89</td>
<td>.49</td>
</tr>
<tr>
<td><strong>Emotional Exhaustion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.24 (.11)</td>
<td>.06</td>
<td>.50</td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>.10 (.09)</td>
<td>-.03</td>
<td>.36</td>
</tr>
<tr>
<td>Emo-rule dissonance</td>
<td>.14 (.10)</td>
<td>-.01</td>
<td>.39</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Task Errors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.11 (.15)</td>
<td>-.13</td>
<td>.48</td>
</tr>
<tr>
<td>Emo-display dissonance</td>
<td>-.07 (.18)</td>
<td>-.50</td>
<td>.24</td>
</tr>
<tr>
<td>Emo-rule dissonance</td>
<td>.17 (.16)</td>
<td>-.02</td>
<td>.68</td>
</tr>
</tbody>
</table>

*Note.* Values in parentheses are standard errors. Boldface type highlights a significant effect (i.e., does not contain zero) as determined by the 95% biased corrected and accelerated confidence interval (95% CI). Emo = Emotion. All analyses controlled for age, gender, and service orientation. Grip time 1 was controlled when grip time 2 was the outcome. Cumulative GPA was included as a control variable when errors were outcomes.

**Interaction of Positive and Negative Display Rules**

In addition to examining whether the main effects of positive and negative display rules had indirect effects on individual outcomes through emotional dissonance, I conducted exploratory analyses using moderated mediation to determine whether the interaction between positive and negative display rules had indirect effects on outcomes through emotional dissonance. I examined the moderated mediational effects of emotional dissonance using the SPSS Macros for Moderated Mediation by Hayes (in press; 2012). These macros enabled me to test whether the various emotional
dissonances mediated the effect of the interaction between positive and negative display rules on the other outcomes examined in this study. Using these macros also allowed me to obtain key statistics needed to determine mediation: a bootstrap point estimate of the indirect effect and a 95% bootstrapped bias corrected and accelerated confidence interval (CI) around the point estimate of the indirect effect. For all tests of mediation, the covariates used in prior analyses (described above) were again used here. All analyses were conducted with and without the seven participants that only completed two calls and compared. The results did not change when the seven participants were excluded from the analyses therefore the results of the full sample are described below, however, no evidence of moderated mediation were found for any of the outcomes.

The mediational effect of emotion-display dissonance on the interaction between positive and negative display rules on the other outcomes was tested. Emotion-display dissonance was not found to be a mediator of the interaction between positive and negative display rules on self-regulatory resource depletion measured as grip time 2 controlling for grip time 1 (Point Estimate = -.02, 95% CI = -1.19 to 1.13) or as resource depletion measured as grip time difference (Point Estimate = -.00, 95% CI = -.98 to 1.12) because the confidence intervals included zero. Emotion-display dissonance was not a mediator of the effect of negative and positive display rules combined on emotional exhaustion (Point Estimate = -.00, 95% CI = -.32 to .35), task errors controlling for cumulative GPA (Point Estimate = .00, 95% CI = -.19 to .26) or task errors not controlling for GPA (Point Estimate = -.00, 95% CI = -.15 to .19) because all of the confidence intervals included zero.
The mediational effect of emotion-rule dissonance on the interaction between positive and negative display rules on the other outcomes was tested. Emotion-rule dissonance was not found to be a mediator of the interaction between positive and negative display rules on self-regulatory resource depletion measured as grip time 2 controlling for grip time 1 (Point Estimate = .38, 95% CI = -.93 to 2.56) or as resource depletion measured as grip time difference (Point Estimate = .24, 95% CI = -.96 to 2.29) because the confidence intervals included zero. Emotion-rule dissonance was not a mediator of the effect of negative and positive display rules combined on emotional exhaustion (Point Estimate = -.13, 95% CI = -.49 to .20), task errors controlling for cumulative GPA (Point Estimate = -.04, 95% CI = -.35 to .25) or task errors not controlling for GPA (Point Estimate = -.06, 95% CI = -.32 to .14) because all of the confidence intervals included zero.

The mediational effect of combined emotional dissonance on the interaction between positive and negative display rules on the other outcomes was tested. Combined emotional dissonance was not found to be a mediator of the interaction between positive and negative display rules on self-regulatory resource depletion measured as grip time 2 controlling for grip time 1 (Point Estimate = .13, 95% CI = -1.07 to 1.73) or as resource depletion measured as grip time difference (Point Estimate = .06, 95% CI = -1.07 to 1.53) because the confidence intervals included zero. Combined emotional dissonance was not a mediator of the effect of negative and positive display rules combined on emotional exhaustion (Point Estimate = -.07, 95% CI = -.42 to .28), task errors controlling for cumulative GPA (Point Estimate = -.02, 95% CI = -.26 to .24) or task errors not controlling for GPA (Point Estimate = -.02, 95% CI = -.22 to .17) because all of the
confidence intervals included zero. Taken together, emotion-display, emotion-rule, and combined emotional dissonance did not mediate the interactive effect of positive and negative display rules on any of the other individual outcomes examined in this study – self-regulatory resource depletion, emotional exhaustion, or task performance.
CHAPTER VI
DISCUSSION

Emotional labor theory and research has come a long way since Hochschild’s (1983) groundbreaking discussion of the topic nearly thirty years ago. Despite the abundance of theory and research on this area, many factors believed to affect the emotional labor process have not yet been investigated or empirically established by research. By exploring several of these unexamined links in the process, this study contributes to the understanding of emotional labor in several ways.

First, this study examined the direct causal effects of display rules on individual outcomes. An abundance of research suggests that the effects of display rules may differ depending on the type of display rule under consideration (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Goldberg & Grandey, 2007; Grandey, 2003; Hopp et al., 2012; Kammeyer-Mueller, Rubenstein, Long, Odio, Buckman, Zhang, & Halvorsen-Ganepola, in press; Kim, 2008; Trougakos et al., 2011). However, most of this research is cross-sectional and correlational which makes it difficult to conclude whether different display rules have different causal effects on outcomes. By using an experimental research design and manipulating the two most commonly described display rules (i.e., show positive, hide negative), the current study was able to provide some direct causal evidence of display rules on individual outcomes. Specifically, positive display rules led to greater emotional dissonance and task errors, whereas negative display rules did not
have a direct impact on any of the individual outcomes. Positive and negative display rules interacted to predict self-regulatory resource depletion. Display rules were also found to have a direct causal effect on the strategies individuals used to regulate their emotions during the experiment to adhere to display rule requirements. Positive and negative display rules both led to greater regulation by suppressing felt and expressing fake or unfelt emotions. Negative display rules also led to less expression of naturally felt emotions. Positive and negative display rules interacted to predict deep acting. Thus, by using an experimental research design, this study was able to demonstrate the direct causal effect of display rules on individual well-being and performance outcomes as well as emotion regulation strategies. A summary of these direct effects are depicted in Figure 16.

Figure 16. Summary of the direct effects of display rules on outcomes.

In addition to the direct effects of display rules on regulation strategies and individual outcomes, this study demonstrated the indirect effects of display rules on
individual outcomes through emotion regulation strategies. This is important because emotional labor researchers contend that emotional labor is a process, initiated by emotional job demands (i.e., display rules directly) which affect the strategies that individuals use to regulate their emotions to conform to display rules and that these strategies then affect individual outcomes (e.g., Grandey, 2000). This idea suggests that in addition to having a direct effect on individual outcomes, display rules may also have an indirect effect on individual outcomes through emotion regulation strategies.

Although an abundance of research has examined these various links separately (e.g., Brotheridge & Lee, 2002; Diefendorff et al., 2005; Judge et al., 2009; Montgomery et al., 2006; Schaubroeck & Jones, 2000; Totterdell & Holman, 2003) only a limited number of studies have empirically examined the indirect effect of display rules on outcomes through emotion regulation strategies (e.g., Kammeyer et al., in press; Goldberg & Grandey, 2007; Trougakos et al., 2011).

By using an experimental design with manipulated display rules and by assessing a wide range of emotion regulation strategies that individuals could use during the call center simulation, this study was able to more precisely and comprehensively demonstrate the indirect effects of display rules on outcomes through emotion regulation strategies. Specifically, both positive and negative display rules indirectly affected self-regulatory resource depletion, task errors, and emotional exhaustion through the emotion regulation strategy of suppressing felt emotions. Positive display rules also indirectly affected emotional dissonance through the emotion regulation strategy of expressing unfelt emotions. Taken together, this study is important because it was able to demonstrate both direct and indirect causal effects of display rules on individual well-
being, performance, self-regulatory resource depletion, and emotion regulation outcomes. Thus, researcher can now firmly conclude that display rules are a key antecedent of the emotional labor process affecting individual outcomes directly and indirectly through emotion regulation strategies. A summary of these indirect effects are depicted in Figure 17.

Figure 17. Summary of the indirect effects of display rules on outcomes.

Another contribution of the current study was that it demonstrated how various individual differences in emotionality and emotion regulation interact with display rules to affect outcomes. Dispositional affectivity, particularly negative affectivity, and chronic emotion regulation tendencies of reappraisal and suppression moderated the effects of display rules on task performance, emotional-dissonance, and self-regulatory resource depletion. These findings are important because they demonstrate that the effects of display rules on individual well-being, performance, and self-regulatory resource depletion differ depending on the trait tendencies that individuals possess. By finding significant interactions, this study demonstrates the importance of continuing to consider individual differences that extend beyond big five factors of personality in
emotional labor research. The interactions between display rules and individual differences are summarized in Table 26.

Table 26. Summary of Significant Interactions between Display Rules and Individual Differences

<table>
<thead>
<tr>
<th>Display Rule Independent Variable</th>
<th>Individual Difference Moderator</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Display Rules</td>
<td>Negative Affectivity</td>
<td>Task Errors</td>
</tr>
<tr>
<td>Positive Display Rules</td>
<td>Reappraisal</td>
<td>Task Errors</td>
</tr>
<tr>
<td>Positive Display Rules</td>
<td>Suppression</td>
<td>Task Errors</td>
</tr>
<tr>
<td>Positive Display Rules</td>
<td>Negative Affectivity</td>
<td>Emotion-Display Dissonance</td>
</tr>
<tr>
<td>Positive DR x Negative DR</td>
<td>Reappraisal</td>
<td>Emotion-Rule Dissonance</td>
</tr>
<tr>
<td>Positive DR x Negative DR</td>
<td>Reappraisal</td>
<td>Task Errors</td>
</tr>
<tr>
<td>Positive DR x Negative DR</td>
<td>Suppression</td>
<td>Task Errors</td>
</tr>
<tr>
<td>Positive DR x Negative DR</td>
<td>Negative Affectivity</td>
<td>Self-Regulatory Resource Depletion</td>
</tr>
</tbody>
</table>

Finally, by taking an event-level approach, this study was able to demonstrate the causal effects of display rules in the context of difficult or negative customer interactions. This is important because most display rule research has examined the effects of display rules using an “in general” or person-level approach (e.g., Austin et al., 2008; Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Diefendorff et al., 2005; Montgomery et al., 2006; Schaubroeck & Jones, 2000). A major limitation of the person-level approach is that it cannot determine whether the observed relationships between variables change or are affected by specific contexts or nuances to a situation. Event-level approaches provide more precision to understanding complex phenomena under specific environmental or situational parameters. Specifically, it may be the case that the positive effects of display rules on individual outcomes generally do exist in typical customer interactions where customers are neutral or pleasant but in negative or difficult customer interactions, positive display rules may actually be a detriment to employee
well-being. Without an event-level focus it is impossible to determine whether the
effects of display rules differ depending on the specific characteristics of the context.
Thus, by adopting an event-level approach to understanding display rules in the context
of difficult customer interactions, this study was able to provide a more fine-grained
assessment of the causal effects of display rules in response to negative affective events.
This helps emotional labor theorists and researchers better understand how display rules
operate in response to negative customer events. The specific findings of this study are
described in greater detail below.

The Causal Effects of Display Rules on Outcome Variables

By manipulating display rule content using an experimental call center simulation
design, this study demonstrated that display rules had both direct and indirect effects on
individual well-being, performance, resource depletion, and emotion regulation
behaviors. Further, by considering individual differences in emotionality and chronic
emotion regulation, this study found that the effects of display rules on individual
outcomes were affected by these emotional trait tendencies. These findings demonstrate
that the differential effects of display rules on individual outcomes are further shaped by
individual characteristics. I discuss these findings in more detail below.

Negative Display Rules: Demands to Hide Negative Emotions

This study found no direct causal effects of negative display rules on any
individual well-being or performance outcomes. This is inconsistent with prior research
and hypotheses suggesting that negative display rules lead to poorer individual outcomes
(Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Grandey, 2003; Kim,
2008). One reason why negative display rules may not have been linked to any of the
outcomes examined in this study is that the difficult context of interacting with negative customers may have evoked negative emotions in all participants causing them to intuitively suppress or hide these negative emotions, regardless of the display rule condition. Thus, participants may have been moving beyond the prescriptive display rules assigned to them as part of the manipulation (Bolton, 2005). Doing so is consistent with social norms, which dictate that interactions with others should be conflict free, and when they are not, individuals should still strive to not show negative emotions so as to avoid escalating the negative impact of the situation (e.g., Ekman & Friesen, 1975). Further, there are general societal norms to provide “service with a smile,” which includes not showing negative emotions when angry (e.g., Rafaeli & Sutton, 1987). As such, all participants may have been intuitively adopting the display rule to suppress their negative emotions, making it difficult to find any effects for the display rule manipulation. In line with this notion, results indicated that 49% of the sample reported suppressing negative emotions during the experiment. Further, from open-ended responses documented at the end of the experiment, the number of participants that reported suppressing negative emotions during the experiment was approximately equal across each of the conditions. Specifically, 31 out of 72 participants with negative display rule requirements and 34 out of 69 participants without negative display rule requirements reported suppressing negative emotions during the call center task.

*Negative Display Rules: Interactive Effects with Chronic Traits*

Despite finding no direct effects of negative display rules on any individual outcomes, this study found that negative display rules did interact with negative affectivity to predict task errors. More specifically, the presence of negative display rules
led to greater average errors than the absence of negative display rules and this effect was stronger for individuals high in negative affectivity than for individuals low in negative affectivity. Individuals high in negative affectivity tend to express and experience negative emotions (Watson & Clark, 1997). As such, I predicted that individuals high in negative affectivity would be more susceptible to experiencing negative emotions in response to difficult customers and as a result would have greater difficulty abiding by these display rules, leading to poorer outcomes. It appears that individuals who tend to experience negative emotions may be experiencing more cognitive disruptions, leading to poorer task performance in response to having to suppress these negative emotions. This finding is consistent with research which suggests that negative emotions can interfere with cognitive performance (Eysenck et al., 2007), and that suppressing emotions also impairs cognitive performance (Gross, 2002; Richards & Gross, 1999, 2000). Further, research has found that engaging in expression suppression does not actually reduce the subjective experience of the emotion (Richards & Gross, 1999). Thus, by adhering to display rules to not show negative emotion, individuals who tend to experience negative emotions may not have been able to reduce or eliminate these emotions, which may have interfered with cognitive performance.

*Negative Display Rules: Links to Emotion Regulation Strategies*

Emotional labor theory suggests that emotional labor is a process initiated by emotional job demands which lead to more proximal effects on individuals (e.g., emotion regulation strategies) than well-being and performance (e.g., Diefendorff & Richard, 2003; Grandey, 2000). According to the emotional labor process perspective, display rules affect individual behaviors and responses to display rules or emotion regulation
which then affect individual well-being and performance outcomes. The results of this study supported this idea, finding that negative display rules had a more distal effect on outcomes by directly affecting emotion regulation strategies.

Specifically, negative display rules led to greater regulation by suppressing felt emotions and faking unfelt emotions. These findings are consistent with a plethora of research which has linked negative display rules to surface acting which consists of two emotion regulation behaviors –expressing unfelt emotion and suppressing felt emotions (Austin et al, 2008; Diefendorff et al., 2005; Grandey, 2003; Kammeyer-Mueller et al., in press; Kim, 2008; Montgomery et al., 2006). This study also found that negative display rules led to less expression of naturally felt emotions, which is not altogether surprising, but such an effect has been rarely documented in the literature (Diefendorff et al., 2005).

In this study, negative display rules were not linked to deep acting, which is consistent with past research (e.g., Kammeyer-Mueller et al., in press). Taken together, negative display rules did not directly affect individual outcomes examined in this study, but were found to directly affect the strategies that individuals used during the experiment to regulate their emotions.

**Negative Display Rules: Indirect Effects via Emotion Regulation**

The current study also supports the emotional labor process assumption (Grandey, 2000) by finding that negative display rules indirectly affected emotional exhaustion, self-regulatory resource depletion, and task performance through the emotion regulation strategy of suppressing felt emotions. For resource depletion, negative display rules were found to lead to greater suppression of felt emotion, which in turn led to lower persistence on the hand grip task after the experiment, suggesting greater self-regulatory
resource depletion. This finding is consistent with prior research that has found that suppressing felt emotions leads to greater self-regulatory resource depletion (Baumeister et al., 1998; Muraven & Baumeister, 2000). Indeed, suppression of felt emotions was negatively related with grip time 2 persistence ($r = -.23, p < .01$), suggesting that the more individuals suppressed their felt emotions, the less they persisted on the hand grip task after the experiment. However, this study demonstrates that the mechanism by which negative display rules relates to resource depletion is through emotion suppression. Negative display rules were not directly related to self-regulatory resource depletion, but caused individuals to suppress their felt emotions, which then lead to greater self-regulatory resource depletion.

Negative display rules did not have a direct effect on emotional exhaustion, but did have an indirect effect on emotional exhaustion through suppression of felt emotions. Specifically, negative display rules lead to greater suppression of felt emotion, which in turn led to greater emotional exhaustion. Further, suppression of felt emotions was positively related to emotional exhaustion ($r = .37, p < .01$) suggesting that the more individuals suppressed their felt emotions, the more exhaustion they experienced. Research has consistently linked negative display rules to surface acting (a component of which involves suppressing felt emotion) (Austin et al, 2008; Diefendorff et al., 2005; Kammeyer-Mueller et al., in press; Kim, 2008; Montgomery et al., 2006), and surface acting to emotional exhaustion (Brotheridge & Grandey, 2002; Goldberg & Grandey, 2007; Grandey, 2003; Judge et al., 2009; Kammeyer-Mueller et al., in press; Kim, 2008; Montgomery et al., 2006; Totterdell & Holman, 2003). Research has even established the mediational role of surface acting on the link of negative display rules with stress and
exhaustion related outcomes (Kammeyer-Mueller et al., in press). Thus, the finding that suppressing felt emotions mediates the effect of negative display rules on emotional exhaustion is consistent with prior research (Kammeyer-Mueller et al., in press).

However, the current research is unique in that the suppression of felt emotions and not faking unfelt emotions was found as the mediator. Surface acting has been widely conceptualized in the literature as involving regulation by suppression and faking. Thus, this study is the first to suggest that it is the suppression of felt emotions, and not the faking of unfelt emotions, that shapes well-being in response to negative display rules. Further, finding that the suppression of emotions rather than faking unfelt emotions is driving the effect of negative display rules on outcomes is consistent with research which has found that suppression and not faking produces ironic effects which have negative implications for individual outcomes (Wenzlaff & Bates, 2000).

Finally, negative display rules indirectly affected performance through the emotion regulation strategy of suppression. Negative display rules led participants to engage in greater suppression of felt emotions, which led to higher task errors. These findings are not surprising given the link between negative display rules and suppression or surface acting (Austin et al, 2008; Diefendorff et al., 2005; Kammeyer-Mueller et al., in press; Kim, 2008; Montgomery et al., 2006). Further, an abundance of research has demonstrated that the suppression of felt emotion leads to a variety of negative outcomes including greater cognitive disruptions and impairments (Gross, 2002; Richards & Gross, 1999; 2000).

Taken together, these results suggests that negative display rules did not have direct effects on any of the individual outcomes examined in this study, but did indirectly
affect emotional exhaustion, task performance, and self-regulatory resource depletion, through the regulation strategy of suppressing felt emotions (and not other regulation strategies). This pattern of findings suggests that negative display rules may not actually affect individual well-being and performance directly, but instead exhibit their influence on individuals by leading them to regulate their affect in a maladaptive way (i.e., suppression). Again, these findings complement theory stating that emotional labor is a process that is initiated by display rule requirements and operates through emotion regulation behaviors (e.g., Grandey, 2000). These findings also complement other experimental research which has widely demonstrated the ill effects of suppressing emotions as opposed to other types of regulation strategies (e.g., Baumeister et al., 1998; Butler et al., 2003; Gross, 2002; Gross & Richards, 2000). Finally, these findings provide some evidence that negative display rules can directly affect individual outcomes depending on individual differences in emotionality (e.g., negative affectivity). Thus, some individuals may be more adversely affected by negative display rules than others based on individual differences.

**Positive Display Rules: Demands to Express Positive Emotions**

In this study, I predicted that positive display rules would result in better individual outcomes. However, the results of the current study demonstrated that positive display rules actually led to poorer individual outcomes including emotional dissonance (using measures of emotion-display dissonance, emotion-rule dissonance, and a combination of the two) and task errors. Although, some research has linked positive display rules to better outcomes (e.g., Brotheridge & Grandey, 2002; Chau, 2007; Kim, 2008), other studies have linked positive display rules to poorer individual outcomes.
including greater physical symptoms (Schaubroeck & Jones, 2000), psychosomatic complaints (Montgomery et al., 2006), and emotional dissonance (Zapf & Holz, 2006). The reason for these conflicting findings for positive display rules has never been identified.

A comparison of the context and design of the current study to past research may shed some light on these differential findings. Past research has primarily focused on the impact of display rules at a more general or person-level (e.g., Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Kim, 2008), whereas the current study examined the effects of display rules at the event-level in the context of difficult customer interactions. In many occupations, customer interactions may tend to be neutral or positive in valence, with only a relatively small proportion actually consisting of rude or hostile customers. A study by Grandey et al. (2004) provides some evidence for the rarity of hostile customer interactions, finding that in a sample of full-time call center employees, only 10-15% of interactions with customers were hostile. Further, interactions with negative customers may occur infrequently because societal norms dictate that interpersonal interactions should be conflict free (Ekman & Friesen, 1975). Thus, in typical interactions with neutral or pleasant customers, conforming to positive display rules to smile and be pleasant may actually have positive implications for both parties. If service employees are asked to respond to emotional labor surveys about ‘typical’ customer interactions, then it may not be surprising that positive display rules are often linked to beneficial outcomes (e.g., Diefendorff & Richard, 2003). However, when customers are rude or difficult (at the event-level) positive display rules may actually be harmful. The event-level focus of the current study and the use of only negative customers enabled me
to determine the impact of display rules in a clearly specified and important context. Specifically, I found that positive display rules led to greater task errors and emotional dissonance in interactions with difficult customers. However, such findings may not be observed in neutral or positive customer interactions.

One reason why negative customer interactions may have affected the relationship between positive display rules and task errors and emotional dissonance is that research has consistently demonstrated that interactions with difficult customers have adverse effects on employees (Ben-Zur & Yagil, 2005; Deery & Walsh, 2002; Dormann & Zapf, 2004; Grandey et al., 2004; Harris & Reynolds, 2003; Rafaeli, Erez, Ravid, Derfler-Rozin, Treister, & Schreyer, 2012; Rupp & Spencer, 2006; Spencer & Rupp, 2009). Further, interactions with difficult customers likely created negative emotions within participants, making it difficult to comply or adhere to positive display rule requirements, creating experienced discrepancies between emotional expectations and preferred emotional responding (e.g., Diefendorff & Gosserand, 2003; Spencer & Rupp, 2006). In support of this assumption, research has suggested that experienced internal discrepancies are unpleasant and may interfere with performance and well-being (Carver & Scheier, 1999).

As mentioned, this study found that positive display rules led to higher emotional dissonance. Emotional dissonance has been variously described as a discrepancy between felt emotions and expressed emotions (Kruml & Geddes, 2000; Pugh et al., 2011) or between felt emotions and emotional expression expectations (Diefendorff et al., 2009, August; Holman et al., 2008). I measured both in this investigation, in an attempt to comprehensively assess the construct in its various forms. Though these constructs
were treated as distinct, the correlation between them was quite high ($r = .79, p < .01$) and the effects of the display rule manipulations on the two types of emotional dissonance, as well as on the combined emotional dissonance measure, were nearly identical. With regard to the impact of positive display rules, having to express positive emotions when interacting with a difficult customer led participants to experience a discrepancy between (a) their felt emotions and the emotions they expressed (emotion-display dissonance) and (b) their felt emotions and the emotions they were expected to express (emotion-rule dissonance).

This effect is likely attributed to the context of the interaction. More specifically, interacting with difficult customers likely evoked negative emotions which were inconsistent with the positive display rule requirements and the emotions that participants expressed. The experience of negative emotions was inconsistent with positive display rule requirement which was reflected by the increase in emotion-rule dissonance. Further, with positive display rules participants were required to express positive emotions to the customers. In order to comply with these display rule requirements, participants reported expressing emotions that were inconsistent with the emotions they felt, or reported experiencing greater emotion-display dissonance. Rather than trying to reduce their experience of these negative emotions or increase their experience of positive emotions, participants appeared to display emotions during the interaction that were discrepant from the emotions they felt, which is reflected by the increased emotion-display dissonance.

With regards to the harmful effect of positive display rules on task errors, the current study’s findings complement recent experimental research which has found that
exposure to a difficult and hostile customer leads to more cognitive performance impairments than exposure to a neutral customer (Rafaeli, Erez, Ravid, Derfler-Rozin, Treister, & Schreyer, 2012). Although Rafaeli et al. did not manipulate display rules, their findings demonstrate that exposure to difficult customers can impair cognitive performance. Experimental research has also found that interactions with difficult or unjust customers make it more difficult to comply with positive display rule requirements than interactions with fair or neutral customers (Rupp & Spencer, 2006; Spencer & Rupp, 2009). Thus, in the context of the current study, participants with positive display rule requirements likely found it difficult to comply with those display rules when interacting with the difficult customers (Beal et al., 2005). Stated differently, participants with positive display rules may have needed to exert greater effort to comply with display rules when interacting with difficult customers. This increased effort needed to conform to positive display rules likely required participants to utilize more cognitive and attentional resources which appear to have interfered with task performance. More research is needed to systematically examine whether the effects of various display rule requirements depend on customer demeanor (i.e., positive, neutral, and negative).

Positive Display Rules: Interactive Effects with Chronic Traits

In addition to the direct effect of positive display rules on task errors, this study found that positive display rules interacted with chronic reappraisal and suppression to predict task errors. Positive display rules were also found to interact with negative affectivity to predict emotion-display dissonance. First, the two-way interaction between reappraisal and positive display rules in predicting errors revealed that errors during the call center were highest for those who had positive display rule requirements and were
high on chronic reappraisal. However, this interaction was further qualified by a three-way interaction between positive display rules, negative display rules, and reappraisal in predicting task errors, such that the effect of positive display rules on average errors was stronger for individuals high in reappraisal than low in reappraisal. This effect was stronger when negative display rules were absent than when negative display rules were present. One reason for this effect could be that individuals who are high in reappraisal may tend to reappraise emotions to reduce the experience of negative emotions (e.g., down-regulate) more so than to reappraise to feel more positive emotions (e.g., up-regulate). Although no research has explicitly examined whether chronic reappraisers differ in the extent to which they tend to up-regulate or down-regulate their emotions, other research has demonstrated that individuals differ in their tendencies and abilities to up-regulate positive emotions and to down-regulate negative emotions (Baumann, Kaschel, & Kuhl, 2005). This suggests that the propensity to up-regulate or down-regulate emotions depends on individual attributes.

Importantly, this previous research has also found that when these affective regulation tendencies are aligned with the demands of the situation, individuals tend to experience better well-being than when abilities and situational requirements are incongruent (Baumann et al., 2005). For example, Baumann and colleagues (2005) found that individuals who had greater abilities and tendencies to up-regulate positive emotions experienced better well-being in response to the need to generate positive emotions than in response to the need to get rid of negative emotions. These researchers argued and found evidence that incongruence between the situational demands and the individual propensities in affect regulation abilities was a key driver of this effect. Thus, if
individuals high in reappraisal have stronger propensities to down-regulate negative emotion than to up-regulate positive emotions, then positive display rules are less aligned with reappraisers’ tendencies to down-regulate emotion.

Similarly, it may be the case that reappraisal to up-regulate emotion is more cognitively effortful than reappraisal to down-regulate an emotion. Thus, having to only focus on increasing positive emotion with positive display rules may have been more cognitively taxing, particularly when there was no direction or guidance for how to regulate negative emotions. Without directions for how to regulate negative emotions, participants high in reappraisal likely had to exert more cognitive effort to turn negative emotions into positive emotions. With both display rules present, individuals high in reappraisal could effectively focus on both reducing negative emotion and then increasing positive emotion as opposed to only trying to increase positive emotion, without direction on how to deal with existing negative emotion.

In partial support of this idea is one study by Mauss, Cook, Cheng, and Gross (2007) who examined the psychological and physiological effects of down-regulating negative emotions in response to anger provocation for chronic reappraisal. They found that individuals high in reappraisal experienced better outcomes than individuals low in reappraisal as a result of down-regulating negative emotions, suggesting that individuals high in reappraisal experience better outcomes in response to down-regulating negative emotions. However, no research has examined the effects of chronic reappraisal and up-regulation of emotion, making it difficult to confirm whether there are differences in up-regulating and down-regulating emotions for reappraisers. More research is needed to explore how chronic reappraisal affects outcomes in response to up-regulating emotions.
and to determine whether there are meaningful differences in the effects of up-regulation and down-regulation for chronic reappraisal, particularly as they relate to cognitive performance.

Positive display rules also interacted with chronic suppression to predict task errors. The two-way interaction between positive display rules and suppression in predicting average errors revealed that the presence of positive display rules led to more task errors than the absence of positive display rules, with the effect being stronger for participants high in suppression. The effect of chronic suppression on positive display rules and task errors is not surprising given the abundance of research which has linked chronic suppression to poorer well-being and most importantly cognitive performance outcomes (e.g., Gross, 2002; Gross & John, 2003). Thus, in the context of a difficult customer interaction, positive display rules interfered with task performance and this effect was stronger for individuals high in suppression than low in suppression.

However, this interaction was further qualified by a three-way interaction between positive display rules, negative display rules, and suppression in predicting task errors. More specifically, the effect of positive display rules on errors was stronger for individuals high on suppression than low in suppression, but this effect was stronger when negative display rules were also present than when negative display rules were absent. Thus it appears that for individuals high in suppression, having both display rule requirements to express positive emotions and to suppress negative emotions was more disruptive to performance than positive or negative display rules alone.

One reason for this effect is that the addition of a second display rule may have required participants to expend more cognitive and attentional resources to adhere to both
display rules as opposed to complying with one display rule (Beal et al., 2005; Diefendorff & Gosserand, 2003). This extra display rule requirement may have been more cognitively taxing for individuals high in suppression than low in suppression. Although, no research has examined whether the number of display rule requirements directly affect task performance, Goldberg and Grandey (2007) did demonstrate that display rules are job demands that require additional resources, thus interfering with other cognitive task requirements. Additionally, research has found that chronic suppression is linked to poorer cognitive performance (Gross, 2002; Gross & John, 2003). Thus, individuals high in suppression already appear to be at a disadvantage in terms of cognitive performance. The addition of display rule requirement may have consumed additional cognitive resources leaving fewer resources available to effectively perform the call center task, leading to greater task errors. Future research should verify whether individuals high in suppression are more susceptible to experience performance decrements in response to increasing demands than individuals low in suppression.

Finally, this study found that positive display rules interacted with negative affectivity to predict emotion-display dissonance. The presence of positive display rules led to greater emotion-display dissonance than the absence of these display rules, but this effect was stronger for individuals high in negative affectivity. Thus, individuals who are high in negative affectivity have a greater risk of experiencing emotion-display dissonance when needing to express positive emotions to difficult customers. Again, it is important to note that these effects occurred in the presence of interactions with difficult customer callers. This effect may not be surprising then given that research has linked negative affectivity to higher surface acting, which involves expressing unfelt emotions
(Gosserand & Diefendorff, 2005; Kammeyer-Mueller et al., in press). The definition of surface acting is consistent with the definition of emotion-display dissonance, which is a discrepancy between felt and expressed emotions. Further, Holman et al. (2008) argued that surface acting and emotion-display dissonance are actually the same construct. Supporting this idea that surface acting and emotion-display dissonance are similar constructs, I found that there was a strong positive correlation between the emotion regulation strategy of faking unfelt emotions and emotion-display dissonance ($r = .81$, $p < .01$). This result suggests that perhaps emotion–rule dissonance is not conceptually different from faking unfelt emotions and may account for the current study’s findings that positive display rules and negative affectivity interact to predict emotion-display dissonance.

**Positive Display Rules: Links to Emotion Regulation Strategies**

In addition to well-being and performance outcomes, this study found that positive display rules had an effect on emotion regulation strategies. More specifically, positive display rules led participants to engage in more regulation strategies of suppressing felt emotions and faking unfelt emotions. These findings are somewhat consistent with prior cross-sectional research, which has linked positive display rules to surface acting regulation strategies (Montgomery et al., 2006). Positive display rules were not linked to the expression of naturally felt emotions or deep acting. It is surprising that positive display rules did not affect deep acting because an abundance of cross-sectional (e.g., Diefendorff et al., 2005; Kim, 2008; Montgomery et al., 2006) and even experimental (Buckner & Mahoney, 2012) research has linked positive display rules to greater deep acting. The lack of effects of positive display rules on deep acting in the
current study may be attributed to the context of the emotional labor episodes: working with difficult confederate callers. Perhaps positive display rules will lead to greater deep acting under conditions in which customers are pleasant or neutral in their demeanor but not when customers are difficult or hostile in their interaction. Possibly supporting this idea is a recent experimental study by Buckner and Mahoney (2012) who found that participants assigned to a condition with positive display rules reported engaging in greater deep acting than participants without display rule requirements in their interactions with customer callers in an experimental call center simulation. Although the participants interacted with confederates acting as the customers, the researchers did not document whether the demeanor of the customers was positive, neutral, or negative. Again, the event-level approach of the current study helps to determine how display rules affect individuals in difficult customer interactions, whereas prior work has taken a more general, person-based approach to understanding the effect of display rules on outcomes (e.g., Kim, 2008; Montgomery et al., 2006). More research is warranted to understand how customer demeanor interacts with display rules to affect emotion regulation strategies.

Although there was no main effect of positive display rules on deep acting, positive and negative display rules interacted to affect deep acting. More specifically, participants with just positive or negative display rules engaged in more deep acting than participants without such display rules. However, participants with positive display rules engaged in more deep acting than participants with both positive and negative display rules. Interestingly, participants with negative display rules did not differ from participants with both display rule requirements in the amount of reported deep acting.
These results suggest that positive or negative display rules will lead participants to engage in more deep acting than having no display rule requirements. However, participants will engage in less deep acting when both positive and negative display rules are present than when only positive display rules are present. These findings compliment an abundance of research linking positive display rules to greater deep acting (Diefendorff et al., 2005; Grandey, 2003; Kammeyer-Mueller et al., in press; Kim, 2008; Montgomery et al., 2006). Thus, again in the context of difficult customer interactions, positive display rules were associated with greater deep acting, but only when negative display rules were absent. It appears that the addition of negative display rules to positive display rule requirements interfered with participant’s propensity to deep act. It may be the case that deep acting is really only used in response to increasing positive emotions, and used less frequently to reduce or to hide negative emotions. Thus, this is consistent with research which has failed to link negative display rules to deep acting (Diefendorff et al., 2005; Kammeyer-Mueller et al., in press; Kim, 2008).

Positive Display Rules: Indirect Effects via Emotion Regulation

In addition to the direct effects of positive display rules on outcomes, this study found that like negative display rules, positive display rules also had indirect effects on outcomes through emotion regulation strategies. Specifically, positive display rules led to greater suppression of felt emotion, which led to greater resource depletion, task errors, and emotional exhaustion. These links are novel given that a majority of research has linked positive display rules to deep acting emotion regulation strategies and to better outcomes (Brotheridge & Grandey, 2002; Chau, 2007; Diefendorff et al., 2005; Diefendorff & Richard, 2003; Kammeyer-Mueller et al., in press; Kim, 2008;
Montgomery et al., 2006). However, some research has linked positive display rules to surface acting which involves both suppressing and faking unfelt emotions (Montgomery et al., 2006). Again, the strategy that employees used to comply with display rules in this study may be partially attributed to the demeanor of the customer and to the emotions felt by service employees. In the context of interactions with difficult customers, participants may have experienced more negative emotions, which may have required them to engage in greater suppression of felt emotions in the process of attempting to comply with positive display rule requirements. Again, research has linked the suppression of felt emotions to a variety of negative well-being and performance outcomes (Baumeister et al., 1998; Butler et al., 2003; Gross, 1998, 2002; Gross & Levenson, 1997; Muraven et al., 1998; Richards & Gross, 1999, 2000; Wenzlaff & Bates, 2000). Therefore, it is not surprising that positive display rules had negative effects on outcomes through the emotion regulation strategy of suppression.

Interestingly, I also found that the emotion regulation strategy of faking unfelt emotions mediated the effect of positive display rules on emotion-display, emotion-rule, and combined emotional dissonance. Positive display rules lead to greater faking of unfelt emotion which led to greater emotional dissonance. Again, in the context of difficult customer interactions, participants may have been experiencing negative emotions which increased their need to fake unfelt positive emotions in order to comply with the positive display rule requirements which lead to greater emotional dissonance. Although research has widely linked suppression to poorer outcomes (see Gross, 2002 for a review), no research has empirically separated the effects of the strategy of faking unfelt emotions. However, in the context of emotional labor research, positive display
rules have been linked to surface acting, which involves faking unfelt emotions as well as suppressing felt emotions (Montgomery et al., 2006). Thus, it is interesting that faking unfelt emotions was linked to higher emotional dissonance.

Again, the definition of emotional dissonance may provide some insight into why it would be linked to faking unfelt emotions. Emotion-display dissonance is defined at the discrepancy between felt and expressed emotions (Diefendorff et al., 2009, August; Kruml & Geddes, 2000; Pugh et al., 2011), thus faking unfelt emotions is conceptually very similar to emotion-display dissonance. Emotion-rule dissonance is the discrepancy between felt and emotional expectations outlined by display rules (Hochschild, 1983; Middleton, 1989; Morris & Feldman, 1997). In the context of the current study this again suggests that individuals were experiencing emotions inconsistent with not only the emotions they actually expressed but the emotional expectations as well. The combined emotional dissonance is a general emotional dissonance construct that is composed of both emotion-rule and emotion-display dissonance.

Indeed, the correlations between faking unfelt emotions and the three emotional dissonance constructs were quite high, again suggesting that faking unfelt emotions and emotional dissonances are conceptually similar constructs. The emotion regulation strategy of faking had significant positive relationships with emotion-display dissonance ($r = .81, p < .01$), emotion-rule dissonance ($r = .68, p < .01$), and combined emotional dissonance ($r = .79, p < .01$). Regardless, the mediational link of faking unfelt emotions on the effect of positive display rules and emotional dissonance suggests that there was a discrepancy between felt emotions and emotional expectations which may have led to a discrepancy between felt emotions and displays as a result of participants faking unfelt
emotions in order to meet the display rule requirement to express positive emotion. Stated differently, individuals who fake unfelt emotions were presumably doing so because there was a discrepancy between felt emotions and emotional expectations.

Taken together, these results suggest that in the context of difficult customer interactions, positive display rules have both direct and indirect effects on employee outcomes and emotion regulation strategies. These findings are important because research has linked positive display rules to both positive (Brotheridge & Grandey, 2002; Diefendorff & Richard, 2003; Kammeyer-Mueller et al., in press) and negative outcomes (Schaubroeck & Jones, 2000), however the cause of these differential effects of positive display rules have never been established by research. By studying the effects of display rules in the context of difficult customer interactions, this study found that positive display rules lead to poorer individual outcomes and more superficial emotion regulation behaviors (e.g., suppression, faking) which also contributed to more negative outcomes. Thus, it appears that positive display rules interfere with employee outcomes in the context of difficult customer interactions. However, more research is needed to confirm that positive display rules are harmful to employee when interacting with difficult customers. Finally, similar to negative display rules this study found an abundance of evidence to suggest that the effects of positive display rules on outcomes are affected by individual differences (e.g., suppression, reappraisal). Thus, some individuals may be more adversely affected by positive display rules than others based on individual differences.
Positive and Negative Display Rules: Interactive Effects on Outcomes

In addition to the main effects of display rules on outcomes, this study found that positive and negative display rules interacted to affect self-regulatory resource depletion. The nature of this interaction suggested that when positive display rules were absent, negative display rules did not have a significant effect on self-regulatory resource depletion. However, when positive display rules were present, negative display rules did have an effect on self-regulatory resource depletion. More specifically, participants with both positive and negative display rules were significantly more depleted than participants with just positive or negative display rule requirements. Thus, it appears that positive display rules and negative display rules were more depleting when both were present compared to when only one was present. The presence of both display rules may have been the most resource-depleting because participants may have had to engage in more effortful processing, monitoring, and management of emotions, comparing actual emotions with not one, but two emotional display rules standards (Beal et al., 2005; Diefendorff & Gosserand, 2003). Further, by having two display rule requirements, participants may have felt the need to engage in greater self-control by not only suppressing, or not showing negative emotions, but also by having to express positive emotions when the preferred response may have been to actually show negative emotions without any consideration of positive emotions (Baumeister et al., 1998; Baumeister et al., 2000; Moller et al., 2006; Schmeichel & Baumeister, 2004; Vohs et al., 2005). Thus, both display rules were more depleting than only one display rule because it likely required greater control and more inhibition of preferred responses which has been implicated as a cause of self-regulatory resource depletion (e.g., Baumeister et al., 1998).
It is important to note that this interaction between positive and negative display rules in predicting resource depletion was only found for the participants who completed three calls and was not found when including the seven participants that only completed two calls (because of technical issues). One reason for this effect is that having to conform to two different types of display rules over a prolonged period of time in response to difficult customers may be more depleting than conforming to these display rules in a shorter period of time. Although research has examined and suggested that self-regulatory resources can rebound after initial resource depletion (e.g., Converse & DeShon, 2009), no research has examined how the length of time spent engaging in self-regulation impacts resource depletion. Thus, more research is warranted to determine whether the length of time spent self-regulating has an impact on regulatory resource depletion.

*Positive and Negative Display Rules: Interactive Effects with Chronic Traits*

Positive and negative display rules also interacted with individual difference variables to predict self-regulatory resource depletion, task errors, and emotion-rule dissonance. Although, many interactions were detected in my analyses, the patterns of the interactions were inconsistent with my hypotheses. However, the patterns of the interactions were consistent across several analyses, suggesting that it was appropriate to interpret the interactions as meaningful. First, I found an interaction interaction between positive and negative display rules in predicting self-regulatory resource depletion. This interaction was qualified by a three-way interaction between positive display rules, negative display rules, and trait negative affectivity. However, this effect was observed for the entire sample (not excluding the seven participants that only completed two calls).
and when excluding the seven participants that only completed two calls. More specifically, positive and negative display rules actually led to greater resource depletion when only one of these display rules were present, but led to less resource depletion when both display rules were present, and this effect was stronger for individuals high in negative affectivity than low in negative affectivity. Thus, the interaction between positive and negative display rules in predicting self-regulatory resource depletion changed dramatically when further moderated by negative affectivity. Specifically, positive and negative display rules alone were more resource depleting than both positive and negative display rules together, particularly for individuals high in negative affectivity.

Because individuals high in negative affectivity tend to express and experience negative emotions (Watson & Clark, 1997), the requirement to only be positive when feeling negative emotions or to not show negative emotions when feeling negative emotions may have actually inadvertently led participants to feel a stronger desire to engage in the forbidden behavior of expressing negative emotions (Wegner & Zanakos, 1994). Partially supporting this idea is research on ironic effects which demonstrate that explicit attempts to try to not behave or think about something may actually lead an individual to ruminate over the unwanted thought or engage in the unwanted behavior (e.g., Wegner, Ansfield, & Piloff, 1998; Wegner & Zanakos, 1994). Thus, by forbidding participants to express negative emotions with positive or negative display rules, participants may have actually felt a stronger desire to show negative emotions, which in turn likely required participants to have to engage in greater self-regulatory control to overcome and inhibit this preferred response (e.g., Baumeister et al., 1998). However,
with integrative display rules, participants high in negative affectivity may not have been
as susceptible to such ironic effects. This may have been because both display rules
combined may not have created a strong emphasis on not engaging in a particular
behavior, as the single display rules. However, more research is needed to determine
whether ironic effects actually do occur with display rules and whether some individuals
are more susceptible to ironic effects based on individual differences.

As previously mentioned, positive and negative display rules interacted with
chronic reappraisal and chronic suppression in the form of three-way interactions to
predict task errors. First, positive display rules, negative display rules, and chronic
reappraisal interacted to predict task errors, such that the effect of positive display rules
on task errors was stronger when negative display rules were absent than when they were
present, and this effect was stronger for individuals high in reappraisal than low in
reappraisal. This effect could be partially attributed to a lack of congruence between
display rule requirements and reappraiser abilities or tendencies to down-regulate
negative emotions as opposed to up-regulate positive emotions. This assumption is
consistent with research which has found that incongruence between affective regulation
abilities and situational requirements leads to poorer individual outcomes than
congruence (Baumann et al., 2005).

Positive display rules, negative display rules, and suppression also formed a three-
way interaction to predict task errors. Unlike, the interaction for reappraisers, the effect
of positive display rules on task errors was stronger when negative display rules were
also present than when they were absent and this effect was enhanced for individuals
higher in suppression than lower in suppression. As suggested earlier, the additional
display rule requirements could have been more cognitively taxing for individuals high in suppression than lower in suppress which in turn could have interfered with task performance (Beal et al., 2005).

Finally, this study found that there was a three-way interaction between reappraisal and positive and negative display rules in predicting emotion-rule dissonance. Specifically, individuals who were high in reappraisal experienced greater emotion-rule dissonance than individuals low in reappraisal when no display rules were present as opposed to when either (or both) positive or negative display rules were present. As a note, individuals without display rules were instructed to be themselves in the customer interactions. Thus, it appears that individuals who are high in reappraisal had a more difficult time “being themselves” and expressing genuine emotions in difficult customer service interactions than adhering to specific display rule requirements in these situations.

One reason for this effect is that participants likely experienced greater negative emotions during the difficult customer interactions. As mentioned, individuals who are high in reappraisal tend to regulate their emotions by trying to change the way they think about a situation so as to change the emotional impact of the situation (Gross & John, 2003). Further, research has demonstrated that chronic reappraisers are more successful in changing their experienced emotions than individuals low in reappraisal (Mauss et al., 2007). Thus, when individuals high in reappraisal had specific display rule requirements they were likely able to reappraise the negative customer interaction to change the emotional impact of the situation to reduce negative and/or increase positive emotions. Thus, participants high in reappraisal were likely effective in reducing any discrepancy
between felt emotions and emotional expectations by changing their emotional experience to be more aligned with the emotional expectations.

However, without display rules individuals were instructed to “be themselves” and to not worry about how they treated or interacted with customers. Yet, the experience of negative emotions due to customer incivility was likely inconsistent with reappraisers’ tendency towards expressing and experiencing positive emotions (Gross & John, 2003), leading them to experience incongruence between emotional expectations of behaving naturally (e.g., positively) and the emotions that they may have actually felt (e.g., negative). Further, despite having the freedom to behave naturally and interact with the customer however they wanted, participants high in reappraisal may have implicitly adopted societal display rules of being pleasant and avoiding conflict in interpersonal interactions (Ekman & Friesen, 1975). Thus, individuals high in reappraisal may not have attempted to change or modify their negative emotions during the interaction because doing so was not part of their task requirements, but may still have been trying to be polite and treat the customer with respect in accordance with societal norms. Thus, they may have still felt negative but tried to be polite and fairly pleasant with customers in accordance with cultural norms for interpersonal interactions.

*Interaction of Display Rules on Emotion Regulation Strategies*

Again, positive and negative display rules interacted to predict the emotion regulation strategy of deep acting. The nature of this interaction was such that deep acting was highest when positive or negative display rules were present than when they were absent. Further, deep acting was higher with positive display rules present and negative display rules absent than when negative display rules were present. There was no
interaction between positive and negative display rules to predict any of the other emotion regulation strategies. Because this study found that positive and negative display rules interacted to predict deep acting, I examined whether there was evidence of moderated mediation between display rules and outcome through emotion regulation strategies. More specifically, this study examined whether the interaction between positive and negative display rules had indirect effects on outcomes through emotion regulation strategies. This study did not find any evidence of moderated mediation. This is not surprising given that the current study found limited effects of the interaction between positive and negative display rules on emotion regulation strategies or outcomes. Thus, the interactive effect of positive and negative display rules did not affect outcomes through any of the emotion regulation strategies examined in this study.

Display Rules and Individual Differences: What Have We Learned?

A contribution of this study is that it demonstrated how the effects of various display rules on individual outcomes are influenced or moderated by individual differences. This is important because emotional labor theory contends that individual differences interact with display rules to affect individual outcomes (e.g., Grandey, 2000) but research that has explicitly examined these effects is sparse (Diefendorff et al., 2011; Schaubroeck & Jones, 2000). Thus, the results of the current study lend some support to this long-held assumption that the impact of display rules on individual outcomes depends on the individual traits of employees. Further, is important to note that the individual difference variables were linked to individual outcomes and that all of these effects and interactions occurred in the context of difficult customer encounters, which may indicate that customer demeanor or the affective valence of the situation may further
impact these relationships (Grandey, 2000). The impact of individual differences and display rules are described below.

First, this study found that chronic reappraisal was associated with less emotional exhaustion and task errors. This is consistent with research which has linked reappraisal to better outcomes (e.g., Gross & John, 2003; Mauss et al., 2007). Surprisingly, positive display rules interacted with reappraisal to predict task errors, such that positive display rules lead to greater task errors and this effect was stronger for individuals high in reappraisal than lower in reappraisal. Further, this effect was even more pronounced when negative display rules were absent as opposed to present. These findings indicate that positive display rules are more cognitively disruptive for individuals high in reappraisal than for individuals low in reappraisal. Additionally, the presence of either positive or negative display rules led to lower emotion-rule dissonance than having no display rules and this effect was stronger for individuals high in reappraisal than low in reappraisal. Taken together, these findings suggest that having just positive display rules led to poorer task performance than other types of display rules, and having no display rule requirements led to higher emotion-rule dissonance than either positive or negative display rules. Thus, in the context of difficult customer interactions, organizations should avoid prescribing positive display rules or providing no display rules to reappraisers and consider assigning integrative or negative display rule requirements to these individuals.

This study found that chronic suppression was linked to lower emotional dissonance and self-regulatory resource depletion which is inconsistent with research which has documented the negative effects of chronic suppression (e.g., Gross & John, 2003). However, it was found that positive display rules interacted with suppression to
predict task errors, such that the effect of positive display rules on task errors was stronger for individuals high in suppression than low in suppression. However, this effect was even stronger when both positive and negative display rules were present. Therefore, organizations should avoid prescribing positive or integrative display rule requirements to suppressors in the context of difficult customer interactions, opting instead to assign no display rules or negative display rule requirements to these individuals.

Additionally, this study found that negative affectivity was associated with greater emotional exhaustion which is not surprising given the abundance of research which has documented the negative effects of negative affectivity (Chen & Spector, 1991; Gross & John, 2003 Larsen & Keteleer, 1991; Robinson et al., 2007; Watson & Clark, 1984, 1997). However, this study also found that negative display rules interacted with negative affectivity to predict task errors. The nature of this interaction was such that the presence of negative display rules lead to greater task errors and this effect was stronger for individuals higher in negative affectivity, than lower in negative affectivity. Thus, negative display rules appear to be more cognitively disruptive for individuals high in negative affectivity.

Negative affectivity also interacted with positive display rules to predict emotion-display dissonance such that positive display rules led to greater emotion-display dissonance and this effect was stronger for individuals high in negative affectivity than low in negative affectivity. These findings are not surprising given that negative display rules and negative affectivity have been linked to poorer outcomes (Brotheridge & Grandey, 2002; Chen & Spector, 1991; Diefendorff & Richard, 2003; Gross & John,
This study also found a three-way interaction between positive display rules, negative display rules, and negative affectivity in predicting self-regulatory resource depletion. Specifically, participants experienced greater self-regulatory resource depletion in response to having only positive or negative display rules requirement than having both display rules and this effect was stronger for individuals high in negative affectivity than low in negative affectivity. Thus, for individuals who are high in negative affectivity, this study found that having just one display rule requirement was more resource depleting than having integrative display rule requirements, and that negative display rule requirements led to greater task errors whereas positive display rules were found to lead to greater emotion-display dissonance for individuals high in negative affectivity than low in negative affectivity. Thus, in the context of difficult customer interactions, organizations might want to assign no display rules or integrative display rule requirements to individuals high in negative affectivity to avoid the ill effects of display rules.

Finally, this study found no direct or interactive effects of positive affectivity on any of the individual outcomes examined in this study. Thus, in the context of interacting with difficult or hostile customers, positive affectivity does not appear to impact well-being, performance, or self-regulatory resource depletion outcomes, nor does it interact with display rules to affect these outcomes. This is somewhat surprising because research has implicated positive affectivity as an important factor in the emotional labor process, affecting display rule perceptions and emotion regulation strategies (Diefendorff et al., 2011; Kammeyer-Mueller et al., in press). Although positive affectivity may be
important for driving display rule perceptions, positive affectivity may not protect or harm individual responses to emotional display rule requirements, this may be especially true given that the context of the call center simulation was negative. In sum, for employees who are high in positive affectivity, the types of display rules prescribed to these employees do not appear to impact individual outcomes in the context of difficult customer interactions.

Emotional Dissonance as a Mediator of other Outcomes

Although not formally hypothesized, the current study conducted several sets of exploratory analyses to examine whether emotional dissonance is a more proximal outcome of display rules than the other outcomes. The current study did not find any mediational links of emotional dissonance on negative display rules and any of the other outcomes examined in this study. There was also no evidence of moderated mediation between the interaction of positive and negative display rules on any of the other outcomes through emotional dissonance. However, one mediational link of combined emotional dissonance was found for positive display rules and emotional exhaustion. This is consistent with theory and research which suggests that emotional dissonance is a more proximal outcome of emotional job demands than other well-being outcomes (Bakker & Heuven, 2006; Zapf et al., 1999). The current study’s findings are partially consistent with research by Bakker and Heuven (2006) who found that emotional demands’ effect on burnout was mediated by emotional dissonance. The current study found a mediational link of combined emotional dissonance between positive display rules and emotional exhaustion which is a core component of burnout (Maslach & Jackson, 1981).
Unlike the present study, Bakker and Heuven conceptualized emotional job demands as having a job that is emotionally demanding rather than specifying the emotional requirements. The current study found that emotional dissonance was a mediator for positive, but not negative display rules. Drawing from these findings, emotional dissonance’s mediating effect between job demands and other well-being outcomes may be dependent on the specific emotional requirements of the job and could also be influenced by customer demeanor. Bakker and Heuven did not explore these factors in their study. Another important difference between the current study and Bakker and Heuven’s study is that the current study’s mediational link was only found for the combined emotional dissonance construct and was not established for emotion-display or emotion-rule dissonance. This is interesting considering that Bakker and Heuven measured emotional dissonance as emotion-display dissonance. Thus, the specific job demands may influence the type of emotional-dissonance experienced as a result of the demands. The current study does suggest that emotional dissonance may be a more proximal outcome of display rules on other well-being outcomes such as emotional exhaustion, but the link seems to be dependent on the type of emotional display rules and the type of emotional-dissonance. More research is needed to further examine the mediational link of the various types of emotional dissonance on emotional job demands and outcomes.

Implications for Practice

The results of the current study have several important implications for practice. First, this study demonstrated that organizations need to be mindful of how the types of display rules they espouse may affect employee outcomes. I found that display rules had
causal effects on individual well-being and performance outcomes, as well as on the emotion regulation strategies participants used to comply with display rules. Therefore, organizations should consider how the type of display rules they are prescribing to employees might impact their outcomes and effectiveness. Organizations should ensure that they are accurately assigning the correct emotional display rules to employees based on job requirements and situational constraints. The foundation for this work would likely involve conducting job analysis to identify the specific emotional demands of the job (Diefendorff et al., 2006; Glomb et al., 2004; Grandey et al., 200; Peterson et al., 2001). By doing a more thorough review of the emotional requirements of the job, organizations should be able to determine if some types of display rules are more relevant to the job than other display rules and avoid the negative consequences of blindly assigning display rules that may prove to be counterproductive in specific situations.

This study demonstrated that requiring employees to express positive emotions led to poorer task performance and a greater sense of discrepancy between expression expectations, expressed emotions and felt emotions. Positive display rules also were found to lead to greater suppression of felt emotions and faking of unfelt emotions. Positive display rules’ impact on these regulation strategies were then found to lead to higher resource depletion, emotional exhaustion, and emotional dissonance. Thus, it is important for organizations to not only consider the immediate implications of display rules on outcomes, but also how display rules are leading to more downstream causal effects.

As an example of this, negative display rules did not have a direct impact on any of the outcomes. However, negative display rules led to greater suppression of felt
emotion which led to greater resource depletion, task errors, and emotional exhaustion. This finding demonstrates that some display rules may not directly affect outcomes, but may directly impact employee behaviors (e.g., emotion regulation strategies) which then affect individual well-being and performance. Taken together, the current study demonstrates that organizations need to carefully consider what and how display rules are being prescribed to employees, as display rules have the potential to interfere with employee well-being and performance. In order to ensure employees perceive the correct emotional display rules, organizations should strive to ensure employees are clear on emotional expectations. Organizations should be able to clearly communicate display rules by including them in job descriptions, training, and reinforcing behaviors (e.g., display rule motto reminders, rewards for adhering to the correct display rules, performance management systems).

It is important to note that all of the effects observed in this study occurred in the context of difficult customer interactions and were affected by individual differences in employee attributes. Therefore, another implication of this study is for job design and examining whether display rules can be customized based on (1) employee emotional traits and/or (2) the specific characteristics of the customer interaction (Diefendorff & Richard, 2008). In considering the results of the current study, a promising avenue for organizations to pursue is whether different employees may perform their job better and experience better well-being with customized variations of specific display rule requirements. For instance, if a job analysis determined that employees need to suppress negative and express positive emotions, it may be better to emphasize positive display rules for individuals high in negative affectivity, negative display rules for individuals
high in suppression, or both positive and negative display rules equally for individuals high in reappraisal to mitigate declines in performance.

In addition to customizing display rules to be more aligned with employee attributes, customized display rules may also be utilized based on the specific characteristics of the customer interaction or situation (e.g., Diefendorff & Richard, 2008). According to Diefendorff and Richard (2008) organizational display rules are usually “prescriptive” in that they require employees to consistently adhere to the specific display rules regardless of the situation. However, organizations may want to consider abandoning this “one-size fits all” approach to display rules and instead assign display rules based on the situation or context of the customer interaction. Diefendorff and Richard (2008) argue that employees likely abandon prescriptive display rules when situations emerge that elicit emotions counter to these display rules, and instead adopt more specific or “contextual” display rules based on the unique characteristics of the situation (e.g., customer demeanor, interaction target, felt emotions). Indeed, Diefendorff and colleagues (e.g., Diefendorff, Morehart, & Gabriel, 2010; Diefendorff & Greguras, 2009; Diefendorff & Richard, 2008) have shown that contextual display rules exist and do in fact differ depending on characteristics of the interaction (e.g., interaction target). As part of their work Diefendorff and colleagues have identified at least six different contextual display rules that employees use depending on characteristics of the context. These contextual display rules include: (a) amplify (express emotion with more intensity than felt), (b) deamplify (express emotion with less intensity than felt), (c) neutralize (express no felt emotion), (d) mask (show unfelt emotions without expressing any felt
emotions), (e) qualify (express emotion with smile to comment of feeling), and (f) express (express naturally felt emotions).

Thus, in considering customizing display rule content based on the characteristics of the situation, organizations might require employees to express positive emotions to pleasant or neutral customers, but then allow or encourage employees to deamplify or reduce their expressions of positive emotions during interactions with difficult or hostile customers. However, before customizing display rules based on employee characteristics or the situation, it is important to determine how the different types of display rules might affect organizational outcomes. Although display rules are generally good for organizational performance (e.g., Pugh, 2001), it is unclear how various types of display rules affect organizational outcomes.

Another implication for practice is based on the design of this study. This study examined the effects of various display rules in response to difficult customer interactions. Although, not all customer service interactions are difficult, this study suggests that display rules do have an effect on individual outcomes in difficult customer interactions. Thus, employee training programs should be focused on teaching employees how to effectively meet display rule requirements when faced with situations that evoke emotions that contradict emotional expectations. One promising area of training that might prove effective in reducing the negative consequences associated with difficult customer interactions is appraisal theory-based training, or cognitive behavior interventions whereby, interventions are designed to reduce stress reactions in employees by training them how to reinterpret work situations and scenarios in alternative, more
adaptive ways (eg., van der Klink, Blonk, Schene, & van Dijk, 2001; Murphy, 1996; Saunders, Driskell, Johnston, & Salas, 1996).

Related to this idea of effective training to help employees cope with difficult customers is to encourage employees to develop implementation intentions or if-then plans for how employees can accomplish goals in the face of obstacles (Gollwitzer, 1999). Implementation intentions might serve to help employees have an effective strategy or plan for how to react when caught off-guard with difficult customer interactions. Research has shown that having implementation intentions or if-then plans help individuals more effectively achieve goals, by providing ways to address specific goal-related obstacles or challenges (Gollwitzer, 1999). Thus, training employees how to comply with display rules when face with difficult customers, will help employees be more successful in adhering to display rule requirements.

Related to employee training, another implication is for organizations to explore ways to manage customer aggression. Research has widely demonstrated the negative effects of difficult or hostile customers on employees (e.g., Grandey et al., 2004; Grandey et al., 2007; Rafaeli et al., 2012; Skarlicki, van Jaarsveld, & Walker, 2008). Given the overwhelming negative effect of customer hostility on employee well-being, organizations should try to find ways to reduce customer aggression. Researchers have suggested that organizations can do this by tracking customers who are aggressive and allowing employees to end calls with difficult or hostile customers (e.g., Rafaeli et al., 2012; Skarlicki et al., 2008). Allowing employees to disengage from difficult customers would create and reinforce the organization’s stance towards a “zero tolerance policy” for customer abuse of employees. This ultimately would help protect employees against the
negative effects of hostile customers while also demonstrating that the organization cares for the well-being of its employees (e.g., Rafaeli et al., 2012; Skarlicki et al., 2008).

A final implication of the current research is in the area of employee selection. In considering the results of this study, the effects of display rules on individual outcomes were affected by the individual differences of chronic suppression, chronic reappraisal, and negative affectivity. In most instances, higher levels of certain individual difference variables strengthened the effect of display rules on outcomes during difficult customer interactions. Therefore, organizational decision-makers should explore how they can assess these traits to determine if some individuals may be better equipped to meet the emotional demands of the job than others based on individual differences in emotionality. This approach to using individual differences in emotionality as a selection tool is an area that will likely prove fruitful for practitioners. This is because the use of individual differences in personality and emotionality for employment selection purposes are widely advocated by many researchers because they are found to be valid predictors of job performance and are not contaminated with indicators of general mental ability which has been found to be associated with adverse impact (Ones, Dilchert, Viswesvaran, & Judge, 2007; Pyburn, Ployhard, & Kravitz, 2008).

Limitations and Future Directions

In considering this study, several limitations and recommendations for future research should be addressed. First, although this study was an important first step to examining the causal effects of various display rules on outcomes in an experimental design, the generalizability of these findings to actual customer service settings may be limited, given that my study was conducted in a laboratory setting with a student sample.
In order to maintain parsimony, many of the processes examined in this study were only observed over a period of approximately 30 to 40 minutes, across three callers for each participant. However, it is likely that many of the emotional labor processes and effects of display rules unfold over a longer period of time. Future research would benefit from studying these emotional labor processes longitudinally, to understand the long-term effects of display rules. Additionally, it is possible that the results of my study could be enhanced had I used full-time employees as participants. By using a student sample, it may be difficult to generalize my findings to full-time employees. Despite some of these limitations of my study sample and design, it is important to note that I was able to find many significant effects. Additionally, my student sample reported working an average of 19 hours per week and 24 percent had experience in customer service jobs, which suggests that my sample does generalize to some extent to the working population.

Further, the goal of my experimental study was to test my theory of whether different display rules actually have a causal effect on individual well-being and performance outcomes. Recently, Highhouse (2009) has emphasized the importance of experimental lab studies in testing theories of cause and effect that can generalize across rather than to organizations. Thus, the experimental lab design of my study was likely appropriate to the goals and objectives of this study. However, the generalizability of the effects to actual call center contexts may be limited by the sample.

A second limitation of my study is that all my confederate callers were difficult, rude, and hostile in their demeanor towards participants. Difficult customers are often used in laboratory studies of emotional labor because experimental and field research has found that customer hostility increases the difficulty of complying with display rules
Therefore, to increase the salience and need to comply with display rules, I made sure that participants only interacted with difficult customers. By having participants interact with difficult callers, my findings may only generalize to customer service situations where customers are difficult or rude rather than to more general, emotionally varied customer interactions. Hostile customer service encounters are likely a rare occurrence, as social norms encourage interpersonal interactions to be pleasant and without conflict (e.g., Ekman & Friesen, 1975). Further, Grandey et al. (2004) reported that in a sample of full-time call center employees, hostile customer interactions occurred only 10 to 15 percent of the time. In actual customer service situations it is also more likely that employees interact with customers displaying a variety of demeanors. However, by focusing on the effects of display rules in the context of difficult customer interactions, I was able to discover effects that may not have been observable using a more general or person-level approach. One example of this is finding is the observation that positive display rules led to poorer outcomes which is inconsistent with person-level research which has linked positive display rules to better outcomes (e.g., Diefendorff & Richard, 2003; Kammeyer-Mueller et al., in press; Kim, 2008). Nonetheless this study helped to determine how various display rules operate in the context of difficult customer interactions. Future research would benefit from examining the effects of display rules in the context of positive and neutral customer interactions.

Another shortcoming of this study is that I only examined integrative display rule components of expressing positive and suppressing negative emotions which are widely prescribed for service occupations (Brotheridge & Grandey, 2002; Diefendorff &
Richard, 2003; Hochschild, 1983; Goldberg & Grandey, 2007; Schaubroeck & Jones, 2000). Emotional labor research has widely acknowledged the existence of other types of display rules that are specific for non-service occupations. Some of these non-service occupation display rule requirements involve suppressing or masking any emotion or expressing negative emotions (Sutton, 1991; Wharton & Erickson, 1993). Despite acknowledging the existence of such display rules, few studies have actually examined the effects of these display rules (exception: Pugh et al., 2011; Zapf & Holz, 2006).

Further, researchers have recently established that display rules involve more than just expressing or hiding certain emotions (Diefendorff & Greguras, 2009; Matsumoto, Yoo, Hirayama, & Petrova, 2005), identifying at least six expression management strategies – express (i.e., show felt emotion), amplify (i.e., express more emotion than is felt), qualify (i.e., show the emotion as felt, but a smile to comment of emotion), deamplify (i.e., express less emotion than felt), mask (i.e., show no felt emotion and cover it with a smile), and neutralize (i.e., show no emotion). This research has also suggested that these six expression management strategies often vary as a function of the context or situation (e.g., Diefendorff & Greguras, 2009). Thus, future research would benefit from examining the effects of different types of display rules that are not specific to customer service occupations and that involve more than just expressing or suppressing emotions.

Another shortcoming of this study is that the display rules were rarely found to directly affect any of the individual outcomes examined in this study. In many instances, display rules primarily affected outcomes either indirectly through emotion regulation strategy of suppression or in combination with individual differences. One reason why display rules may not have directly affected many of the outcomes examined in this study
is that the use of scripts and rigid prescription of display rules for interacting with customers may have caused participants to engage in role distancing which is believed to protect individuals against negative outcomes that threaten or harm the self in service interactions (Leidner, 1993). Role distancing occurs when individuals are not personally invested in a role which is likely to occur when work roles or heavily scripted (Leidner, 1993). Therefore, by adhering to the script and by following display rules, participants were likely able to distance themselves from their roles and duties, and avoid harm caused by display rules and/or the negative situation. Future research should ensure that individuals are personally invested in their service roles, perhaps by providing monetary or other incentives for a job well done. This will provide a stronger link between experimental simulations and real-world work situations.

Finally, this study only examined a limited number of individual difference variables and outcomes. Although this study only focused on a small number of individual differences, the findings demonstrated that individual differences in emotionality are important and relevant to emotional labor theory and research. Emotional labor research should continue to examine how individual differences impact emotional labor processes. Future studies would benefit from examining a broader range of personality and individual difference variables (i.e., emotional expressivity, chronic regulatory focus) both within and outside of the emotional labor literature that could be theoretically linked to emotional labor processes (Kring, Smith, & Neale, 1994; Lockwood, Jordan, & Kunda, 2002). This study also only examined four outcome variables. Although these outcomes covered a broad range of individual outcomes including performance, self-regulatory resource depletion, and well-being there are an
abundance of additional outcomes that should be examined including felt inauthenticity (Erickson & Ritter, 2001) and affective delivery performance (Diefendorff & Richard, 2003; Grandey, 2003). Future research would benefit from examining more outcome variables derived but not limited to the emotional labor literature. A broader range of outcome variables would enable a better understanding of the consequences of different types of display rule requirements.

Conclusion

This study made several important contributions to better understanding the process of emotional labor (e.g., Grandey, 2000). First, by using an experimental design and manipulating display rule content, I demonstrated that in the context of difficult customer interactions display rules have both direct and indirect causal effects on individual well-being, performance, and self-regulatory resource depletion outcomes and that these outcomes differ depending on the content of the display rules. Display rules had direct effects on individual outcomes and the strategies individuals used to regulate their emotions to comply with display rules. I also found that the indirect effects of display rules were primarily driven by the strategies individuals used to regulate their emotions in response to the display rule requirement. The indirect effects of display rules on outcomes were primarily driven by the emotion regulation strategy of suppression and to a much lesser extent other documented emotion regulation strategies (e.g., faking unfelt emotions) examined in the literature. These findings are important because a majority of emotional labor research has focused on the emotion regulation strategy of surface acting, which involves both suppressing felt and faking unfelt emotions. The result of the current study suggest that it is actually the suppression of felt emotions, and
to a much lesser extent the faking of unfelt emotions that are driving these negative outcomes. This is not surprising given the abundance of research which has linked the suppression of felt emotions to a variety of negative individual outcomes (Baumeister et al., 1998; Butler et al., 2009; Gross, 1998; Gross & Levenson, 1997; Muraven et al., 1998; Richards & Gross, 1999, 2000; Trougakos et al., 2011). Thus, emotional labor researchers may benefit from examining the effects of these two regulation strategies separately as opposed to in combination.

Finally, this study demonstrated that the causal effects of display rules on individual outcomes differed depending on individual differences in emotionality and chronic emotion regulation tendencies. This suggests that display rules do not affect everyone in the same way. Future studies of emotional labor should continue to consider the impact of individual differences. The results of this study suggest that organizations need to be mindful of how emotional job demands and the context of these demands may affect employee outcomes. Further, organizations need to consider how employee traits and individual differences may operate in relation to emotional job demands to promote employee well-being and job performance.
REFERENCES


Eysenck, M.W., Derakshan, N., Santos, R., & Calvo, M.G. (2007). Anxiety and cognitive


Katz & Kahn (1966) Organizations and the system concept (pp. 257-267).


administrative science quarterly, 36, 245-268.


APPENDICES
APPENDIX A

TRAINING SCRIPT

“Thank you for participating in our study. In collaboration with other Universities across the country, we are in the process of studying telemarketer jobs and call centers for a small, but rapidly growing office supply company that will soon be acquired by a large national office supply company. More importantly, we are interested in exploring the effects of communication technology, an internet-based phone service known as Skype, on customer service interactions. You will be asked to do several tasks required of a telemarketer and you will be evaluated by the researchers on how accurately the tasks can be done and how long it would take an average individual to do these kinds of tasks as well as examine the effects of using the Skype software. As part of this task, you will be receiving calls, using Skype, that have been randomly routed to this call center location from various United Office Solutions customers across the United States. This company has been experiencing rapid growth in the past year and will soon be acquired by a large national office supply company. This nation office supply company has asked us to explore how to improve quality in call center operations as they prepare to acquire United Office Solutions.

I will now give you an overview of your task requirements. To give you some background, call centers typically have a steady flow of incoming calls therefore, it is important that you keep your calls quick. Please keep in mind there is always another
call waiting to be answered. When you are finished with the experiment, a researcher will come and stop you, but, until then, keep answering the phones.”

“Okay, now you will be given our company, United Office Solutions’, catalog which contains a list of all the products and items that we carry (hand out the catalogue). In most instances, when a customer calls in, he/she will most likely give you the page number that the item they want to order is on. If they don’t give you the page number, feel free to ask them to give you the page number because this is the best way to find the item. (Show them the page numbers). After you have the page number, find the item they want to order, you will be able to find the item number and the cost of each item. You will have this catalogue to refer to and use during all of your calls so that you can look through and find the items the customer is ordering. TWO THINGS TO NOTE: (1) The customer may order items that are no longer in the current catalog if they have an older version. Before placing the order, please be sure to check the catalog for the item, but if it’s not in there, just let the customer know the item is no longer available – no big deal, we just don’t carry it anymore. (2) Nothing in the catalog is currently on sale.”

“You will also have an order form (hand one out of participant) which you will be filling out by hand during your service call. This order form will contain information that would need to be obtained, such as space for the page number, item number, description, quantity, price, place for tax and shipping, and total price (show each of these spots on the order form to participants). It also has a place for shipping information and payment information. You’ll want to make sure all this information is completely filled in. You will complete one (1) order form per call. Is this clear?”
“Also, there is a general script you will need to follow, just as a telemarketer would (hand out the script to participant). You will have this script in front of you, so it doesn’t have to be memorized. [Go through script, X-ACTO Electric Sharpener on page 409 item from catalog and pretend to go through practice, going over where to write info, to figure out tax, and shipping and handling].”

“Why don’t you take a couple of minutes to get familiar with these materials.”

5 Minutes. After 5 minutes, the experimenter will re-enter the room ask the participant if he/she has any questions, answer any questions the participant has, and then proceed with the end of training.

Display Rule Condition Training

This paragraph will be based on which experimental condition of display rule condition the participant is in. See Appendix F – I for four manipulations.

“Remember you will be evaluated on how accurately, or correctly, you can fill out the sales order form and [INSERT APPROPRIATE DISPLAY RULE MANIPULATION HERE]. This means your thoroughness and attention to detail while you record all information. You will be evaluated in two ways, just as in a real call center: by the customers who are calling in and a supervisor monitoring your performance. If you do not meet these expectations, then you will be taken off the phones and repeat training. This is consistent with consequences of poor performance in organizations. However, if you meet these requirements, you will receive a special bonus. Think of this as earning a bonus for your job performance.”
“Alright, let’s begin. As soon as I leave, your first caller will ring. I won’t be coming back in until the end of the experiment, so if you run into any problems, just handle it the best you can. I will come get you when we’re finished.”
APPENDIX B

SCRIPT FOR FIRST DIFFICULT CALLER

REMEMBER: YOU ARE IN A BAD MOOD YOU ALSO THINK THE EMPLOYEE IS ASKING UNECESSARY QUESTIONS AND IS VERY INCOMPETENT!!!

Sales Clerk: Thank you for calling United Office Solutions. My name is ______ and I will be assisting you with your order today. What item may I help you with?

RA: Give me a bottle of the Expo 22 ounce Spray whiteboard cleaner.

Sales clerk will record item number and quantity if applicable. They will look up the price and record all information. May ask you for more information.

RA: What? Can’t you just type it in your computer? It’s on page 394. Do you see it?

Sales Clerk: Could you tell me what page it is on?

RA: What? Can’t you just type it in your computer? It’s on page 394. Do you see it?

Sales Clerk: What else can I help you with today?

RA: I need the Sigma Metallic Bubble Mailers on page 267. I want the metallic blue color shown in the photo at the top.

Sales Clerk: I can’t find it – you must have an old issue.

RA: I think you should check again, because I just got this catalogue in the mail, and I am looking right at it.

Sales Clerk: I am sorry, but it is not in the most recent catalogue.

RA: Fine, whatever. I will just get something else instead. Do you have the Smead Poly File Folders on page 90 or is my catalogue too old?

Sales Clerk: Yes, we have that item in stock.

RA: Okay...then give me four packs of those.
Sales Clerk: Should Ask which type you want

RA: Sigh with impatience. I dunno, I guess I’ll take the assorted colors pack.

Sales Clerk: Is there anything else I can help you with today?
RA: Thankfully, no. There is nothing else I need. My catalogue is probably too out of date to order anything else anyways.

Sales Clerk: We can ship your order in either 2 or 5 business days. Which would you prefer?
RA: Just do five.

Sales Clerk: Please hold just a minute while I get your total.
RA: Fine.

Sales clerk will add up all costs to arrive at sub-total, figure in tax, and then shipping cost (Sales clerk will refer to order form for prompts)

Sales Clerk: Your total is $65.75. How would you like to pay for that?
RA: It’s a Visa - card number 9410-0583-3462-7269, expiration date is October 13.

Sales Clerk: I need to obtain your billing and shipping information. Can I get the billing name, full address, and phone number please?”

RA: Samuel Dominowski. I am at 498 Flower Street. Atlanta, GA 40492. My phone number is (404) 837-5928.

Sales Clerk if unsure how to spell the names should verify spelling with caller.

Sales Clerk: Thank you, Mr. Dominowski. Is your billing address and information the same as the shipping address?
RA: Of course it is. Why would it be different?

Sales Clerk: Thank you, Mr. Dominowski. You are all set. Your shipment will arrive in 5 business days. Is there anything else that I can do for you today?
RA: No that’s it.

Sales Clerk: Alright then, thank you for calling ________.
RA: Just hang up without saying anything
APPENDIX C

SCRIPT FOR SECOND DIFFICULT CALLER

**REMEMBER: YOU ARE IN A BAD MOOD AND YOU ALSO THINK THE PRODUCT COSTS ARE TOO HIGH!!!**

Sales Clerk: Thank you for calling ___________. My name is _____ and I will be assisting you with your order today. What item may I help you with?

RA: I want item number 581-728-433 the Swingline Optima 20 Electric Punch.

Sales clerk will record item number and quantity if applicable. They will look up the price and record all information. May ask you for more information

Sales Clerk: Could you tell me what page it is on?

RA: *The caller will sigh with impatience.* I dunno. It’s page 290.

Sales Clerk: What else can I help you with today?

RA: Wait, is it on sale?

Sales Clerk: No – its not.

RA: Are you sure because I saw it advertised a couple weeks ago as being on sale, and now you’re telling me it’s not?!!?! I don’t understand how it can be advertised to me as on sale but then I call and it is not. Fine – whatever! I also want the Papermate Gel Retractable Pens and they are on page 356.

Sales Clerk: What color would you like? / Which kind would you like?

RA: Hold on. *(annoyed).* I want two packs of the Bold Point pens in green.

Sales Clerk: If green isn’t listed, it must not come in this color.

RA: Are you sure they don’t come in green??!! You sound like you’re new – can you please check again?
Sales Clerk: Yes, it does not come in this color

RA: Fine, I’ll order them in red. They do come in red right?

Sales Clerk: Yes. What else can I help you with today?

RA: Nothing.

Sales Clerk: We can ship your order in either 2 or 5 business days. Which would you prefer?

RA: How much is 2 days?

Sales Clerk: $22.50

RA: What? How much is it? (wait for sales clerk to repeat cost) That is a rip off! Don’t you have some sort of free shipping for orders over $100.00?

Sales Clerk: I am sorry but we don’t offer that.

RA: This is a joke. Fine, I’ll take the 5 day shipping.

Sales Clerk: Please hold just a minute while I get your total.

Sales clerk will add up all costs to arrive at sub-total, figure in tax, and then shipping cost (Sales clerk will refer to order form for prompts)

Sales Clerk: Your total is $139.79. How would you like to pay for that?

RA: I want to use my Mastercard.

Sales Clerk will ask for card number 5483-0290-3874-3360 and expiration date (07/2014).

Sales Clerk: I need to obtain your billing and shipping information. Can I get the billing name, full address, and phone number please?

RA: My name is Richard Williams.

When prompted give address (15 Longbranch Road, Tampa Florida, 34238). Again when prompted give phone number (813) 263-9477 – Is that it? Billing information is the same as shipping information

Sales Clerk: Thank you, Mr. Williams. You’re all set. Your shipment will arrive in 5 business days.
APPENDIX D

SCRIPT FOR THIRD DIFFICULT CALLER

REMEMBER: YOU HAVE BEEN ON HOLD FOR A LONG TIME AND ARE VERY ANNOYED; YOU ALSO THINK THE EMPLOYEE IS VERY INCOMPETENT!!!

Sales Clerk: Thank you for calling United Office Solutions. My name is ______ and I will be assisting you with your order today. What item may I help you with?

RA: Well, I sure hope you can help me. I’ve been on hold for over 10 minutes! That is pretty ridiculous! I want the Office Depot Project Case. I want 3 of these.

Pause, and wait for Representative to ask you for additional information.

Sales Clerk: Inquires for more information.

RA: Information is... (be impatient and short when giving information)

- Page: 134
- Item number: 581-444-112
- Price: $6.29 each

Sales clerk will record item number and quantity if applicable. They will look up the price and record all information.

Sales Clerk: What else can I help you with today?

RA: Yeah, the Danish Butter Cookies on page 480. I want one of the Famous Dane, 3-pound tin.

Sales Clerk: Will there be anything else today?

RA: No.

Sales Clerk: We can ship your order in either 2 or 5 business days. Which would you prefer?

RA: Two days.
Sales Clerk: Please hold just a minute while I get your total.

RA: Is this going to take long? I have already spent enough time on hold today!

Sales clerk will add up all costs to arrive at sub-total, figure in tax, and then shipping cost (Sales clerk will refer to order form for prompts)

Sales Clerk: Your total is 45.37. How would you like to pay for that?

RA: My American Express.
Sales Clerk: We don’t take American Express.

RA: Since when don’t you take American Express? I can’t believe this! I’ll just put it on my Discover or did you stop taking Discover?

Sales Clerk: Yes.

RA: My card number is 2537-9879-2810-0583. The card expiration date is June 2013.

Sales Clerk: I need to obtain your billing and shipping information. Can I get the billing name, full address, and phone number please?”

RA: Shipped it to Regina Carson at 3012 Astor Avenue, Sierra Vista, Arizona 85613.

Bill it to Andrew Miller. 2030 Spring Lake Road. Albany, New York. 12401. My phone number is (867)-930-1734.

Sales Clerk if unsure how to spell the names should verify spelling information with caller.

Sales Clerk: Thank you, Mr. Miller. You are all set. Your shipment will arrive in 2 business days. Is there anything else that I can do for you today?

RA: Alright.

Sales Clerk: Alright then, thank you for calling.

RA: Bye.
APPENDIX E

UNITED OFFICE SOLUTIONS REPRESENTATIVE CALL SCRIPT

**Representative:** Thank you for calling United Office Solutions. My name is _____ and I will be assisting you with your order today. What item may I help you with?

*Look up the item in the catalogue. Ask caller for page number if they do not provide you with the page number. Record the appropriate product information on the sales order form*

**Representative:** What else can I help you with today?

*Enter product order information on the order form.*

**Representative:** Will there be anything else today?

*When all orders have been placed please proceed with the rest of the script below*

**Representative:** We can ship your order in either 2 or 5 business days. Which would you prefer?

**Representative:** Please hold just a minute while I get your total.

*Add up all costs to arrive at sub-total, figure in tax, and then shipping cost; refer to order form for necessary information*

**Representative:** Your total is ______. How would you like to pay for that?

*Record payment information on sales order form*

**Representative:** I need to obtain your billing and shipping information. Can I get the billing name, full address, and phone number please?

*Fill in information on sales order form*
Representative: Thank you, Ms./Mr. ________. You are all set. Your shipment will arrive in ____ business days. Is there anything else that I can do for you today?
APPENDIX F

POSITIVE DISPLAY RULE MANIPULATION

“However, because this is a customer service job, and our organization has a climate of enthusiasm and friendliness, you will also be evaluated on your ability to be upbeat and enthusiastic and show positive emotion to your customers. Thus, it is important that you do the task well, as well as express happiness, warmth, and enthusiasm and show positive emotion. Again some customer service organizations demand their employees to provide “service with a smile” despite the circumstances – this is the requirement here as well. Our organization and its customers value their employees being very friendly and outgoing. Our motto here is “putting a smile on your face will put the smile in your voice!” No matter what the situation is always be friendly, enthusiastic, and show positive emotion. Put on a smile and be friendly. We are not only interested in how correctly you do the tasks, but also your ability to express friendliness and enthusiasm.”
APPENDIX G
NEGATIVE DISPLAY RULE MANIPULATION

“However, because this is a customer service job, and our organization’s climate does not tolerate the expression of negative emotions, particularly expressions of boredom, irritation, or disappointment you will also be evaluated on your ability to hide and to not show any negative emotion to your customers. You must be professional at all times and have control over your feelings. Thus, it is important that you do the task well, as well as hide feelings of anger, frustration, and disappointment by suppressing these negative emotions. Again, some customer service organizations demand their employees “have control over your negative feeling” despite circumstances – this is the requirement here as well. Our motto here is “Keeping your cool will ensure your negative feelings don’t show!” Therefore, if you get irritated or stressed, don’t ever let them know you are feeling bad. We are not only interested in how correctly you do the tasks, but also your ability to suppress negative emotions.”
APPENDIX H
INTEGRATIVE DISPLAY RULE MANIPULATION

“However, because this is a customer service job, and our organization has a climate of enthusiasm and friendliness, you will also be evaluated on your ability to be outgoing and enthusiastic and show positive emotion as well as your ability to be calm, and avoid or hide any expressions of irritation or negative emotion to your customers. Thus, it is important that you do the task well, as well as express friendliness and joy and show positive emotion. Again, some customer service organizations demand their employees to “Show positive emotions and hide negative emotions” despite the circumstance – this is the requirement here, as well. Our organization and its customers value their employee being very friendly and outgoing and appreciate employees who never show anger or irritation. Our motto here is “Even if you are riled, always show your customer a smile!” It is extremely important for the sake of quality customer service that if you have any negative feelings or reactions, please try your best not to let those feelings show, and instead always be friendly, enthusiastic, and show positive emotions despite the circumstance. Therefore if you get irritated or stressed, don’t ever let them know you are feeling bad – and instead put on a smile and be friendly. We are not only interested in how correctly you do the tasks, but also your ability to express friendliness and enthusiasm and your ability to hide negative emotions.”
APPENDIX I

DISPLAY AUTONOMY MANIPULATION

“However, please note that you can act however you want with the caller. Some customer service organizations demand that their employees present “service with a smile” despite the circumstances – this is NOT a requirement here. In fact, our organization and its customers value their employees being “real” and being themselves. Our motto here is “We want you to be you!” Therefore, if you get irritated or stressed, handle it however you want – just relax and be yourself. We are only interested in how correctly you can get the tasks done. We will NOT be evaluating you on how you treat or interact with the customer.”
APPENDIX J

DEMOGRAPHIC QUESTIONNAIRE

1. Age: _____

2. Sex (circle one): Male / Female

3. Ethnicity (circle):
   a) Caucasian
   b) African American
   c) Asian American
   d) American Indian
   e) Hispanic
   f) Other:__________.

4. How many hours per week do you work on average?

5. How long have you worked with your current company?

6. What is your job title?

7. Please list your primary job duties involved in this position.

8. Have you ever had any job experience in a service-occupation? If yes please list your service jobs.

9. What is your academic major?

10. What is your year in school?
APPENDIX K

CHRONIC EMOTION REGULATION SCALE ITEMS

Reappraisal Items:
1. I control my emotions by changing the way I think about the situation I’m in.
2. When I want to feel less negative emotion, I change the way I’m thinking about the situation.
3. When I want to feel more positive emotion, I change the way I’m thinking about the situation.
4. When I want to feel more positive emotion (such as joy or amusement), I change what I’m thinking about.
5. When I want to feel less negative emotion (such as sadness or anger), I change what I am thinking about.
6. When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.

Suppression Items:
7. I control my emotions by not expressing them.
8. When I am feeling negative emotions, I make sure not to express them.
9. I keep my emotions to myself.
10. When I am feeling positive emotions, I am careful not to express them.
APPENDIX L

PANAS SCALE ITEMS

1. Interested
2. Irritable
3. Distressed
4. Alert
5. Excited
6. Ashamed
7. Upset
8. Inspired
9. Strong
10. Nervous
11. Guilty
12. Determined
13. Scared
14. Attentive
15. Hostile
16. Jittery
17. Enthusiastic
18. Active
19. Proud
20. Afraid
APPENDIX M

SERVICE ORIENTATION SCALE ITEMS

1. I enjoy helping others.
2. The best job I can imagine would involve assisting others in solving their problems.
3. I can get along with most anyone.
4. I pride myself in providing courteous service.
5. It is natural for me to be considerate of others’ needs.
APPENDIX N

EMOTION REGULATION SCALE ITEMS

Adapted Suppression of Felt Emotions Scale Items (Brotheridge & Lee, 2003; Grandey, Dickter, & Sin, 2004; Totterdell & Holman, 2003)
1. During this call, I resisted expressing my true feelings.
2. During this call, I hid my true feelings.

Adapted Faking of Unfelt Emotions Scale Items (Brotheridge & Lee, 2003; Grandey, 2003; Grandey et al., 2004; Totterdell & Holman, 2003)
1. During this call, I faked my feelings.
2. During this call, I showed an emotion that I did not feel.

Adapted Deep Acting Scale Items (Brotheridge & Grandey, 2002)
1. During this call, I made an effort to actually feel the emotions that I needed to display.
2. During this call, I tried to actually experience the emotions that I had to show.

Adapted Naturally Felt Emotions Scale Items (Diefendorff et al., 2005)
1. During this call, I expressed emotions that were genuine.
2. During this call, I showed what I actually felt.

Adapted Cognitive Change Scale Items (Diefendorff et al., 2008)
1. During this call, I reinterpreted the situation in a more positive light.
2. During this call, I considered how things could be worse.
APPENDIX O

EMOTIONAL DISSONANCE SCALE ITEMS

**Emotion-display dissonance**
1. During this call, I expressed an emotion that did not agree with what I was feeling.
2. During this call, I expressed an emotion that was different from what I felt.

**Emotion-rule dissonance**
1. During this call, I felt emotions that disagreed with what I was supposed to show in this role.
2. During this call, I felt emotions that did not match the emotions I was expected to express in this role.
APPENDIX P

UNITED OFFICE SOLUTION SALES ORDER FORM

Billing Address:  
Name: ____________________________  
Address: ____________________________  
(City) __________________ (State) _______ (Zip) __________  

Shipping Address:  
Name: ____________________________  
Address: ____________________________  
(City) __________________ (State) _______ (Zip) __________  

Phone: (______) ____________________________ (Day/Time)  
☐ Check box if billing & shipping address are same

Sales Order Information

<table>
<thead>
<tr>
<th>Page #</th>
<th>Item Number</th>
<th>Product Name</th>
<th>Description</th>
<th>Qty. Quantity</th>
<th>Price Per Unit</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shipping Costs (5 day delivery):**

- ≤ $50 in sub-total = $5 in shipping
- $51 - $100 in sub-total = $10 in shipping
- ≥ $101 in sub-total = $15 in shipping

**Shipping Costs (2 day delivery):**

- ≤ $50 in sub-total = $12.50 in shipping
- $51 - $100 in sub-total = $17.50 in shipping
- ≥ $101 in sub-total = $22.50 in shipping

Sub-total: ________________

Tax (6.5%) (round up from 5): ________________

Before Shipping Sub-total: ________________

Shipping (see left): ________________

Final Total (round up from 5): ________________

Method of Payment (Check one)

☐ United Office Solutions Visa  ☐ United Office Solutions Gift Card  ☐ Check or Money Order

☐ Visa  ☐ MasterCard  ☐ Discover

Account Number ____________________________

Expiration Date ____________________________  
(Month) _______ (Year) __________

Gift Card #: ____________________________  
PIN #: ____________________________
APPENDIX Q

MOMENTARY EMOTIONAL EXHAUSTION SCALE ITEMS

1. I feel emotionally drained from this call center task.
2. I feel used up right now.
3. This call center task really put a lot of strain on me.
4. I feel burned out from this call center task.
5. This call center task put too much stress on me.
6. I feel I worked too hard on this call center task.
APPENDIX R

PARTICIPANT DISPLAY RULE MANIPULATION CHECK

Instructions: At the beginning of this study, what were you specifically told by the researchers you were going to be evaluated on during these calls?” Please check all items that apply.

1. _____ Your ability to write a short story about yourself. e

2. _____ Your ability to not show negative emotions. c, d

3. _____ Your ability to type 100 words per minute. e

4. _____ Your ability to correctly complete the sales order form. a

5. _____ Your ability to be friendly and express positive emotions. b, d

6. _____ Your ability to trace a picture without lifting the pen from the paper. e

a item should be endorsed for all participants.
b item should be endorsed for participants in the express positive emotions display rule condition.
c item should be endorsed for participants in the do not show negative emotions display rule condition.
d item(s) should be endorsed for participants in the integrative emotions display rule condition.
e item(s) should not be endorsed by any participant because they are distracter items.
APPENDIX S

THE BRIEF MOOD INSPECTION SCALE ITEMS

1. Lively
2. Peppy
3. Active
4. Happy
5. Loving
6. Caring
7. Calm
8. Content
9. Drowsy
10. Tired
11. Nervous
12. Gloomy
13. Fed Up
14. Sad
15. Jittery
16. Grouchy
APPENDIX T

SELF-REGULATORY MANIPULATION CHECKS

**Effort**
1. I exerted a lot of effort during the tasks.
2. I put a lot of energy into the tasks.
3. The tasks required a great deal of effort.

**Difficulty**
1. It was difficult to comply with the task instructions.
2. It was difficult to complete the tasks.
3. The tasks were tough.

**Fatigue**
1. I felt tired after completing the tasks.
2. I felt fatigued after the tasks.
3. The tasks were draining.
APPENDIX U

COMPLIANCE WITH DISPLAY RULE MANIPULATION CHECK

1. This participant expressed enthusiasm.
2. This participant expressed friendliness.
3. This participant expressed happiness.
4. This participant expressed warmth.
5. This participant expressed positive emotions.
6. This participant expressed boredom.
7. The participant expressed irritation.
8. This participant expressed anger.
9. This participant expressed frustration.
10. This participant expressed disappointment.
APPENDIX V

IRB APPROVAL

March 18, 2011

Cecily Becker
1051 Beacon Hill Cr. #11
Cuyahoga Falls, Ohio 44221

From: Sharon McWhorter, IRB Administrator

Re: IRB Number 20110316 “Disentangling the Effects of Different Display Rules”

Thank you for submitting your Exemption Request for the referenced study. Your request was approved on March 18, 2011. The protocol represents minimal risk to subjects and matches the following federal category for exemption:

☑ Exemption 2 - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.

☐ Exemption 1 - Research conducted in established or commonly accepted educational settings, involving normal educational practices.

☐ Exemption 3 - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public office.

☐ Exemption 4 - Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.

☐ Exemption 5 - Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.

☐ Exemption 6 - Taste and food quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact me to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

☐ Approved consent form/s enclosed

Cc: James Diefendorff - Advisor
Cc: Stephanie Woods - IRB Chair

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
330-972-7666 • 330-972-6381 Fax
The University of Akron is an Equal Education and Employment Institution