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Understanding enthusiasm: structure, function, and social regulation

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Understanding Enthusiasm

Structure, Function, and Social Regulation

Rijn Vogelaar

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Understanding Enthusiasm

Structure, Function, and Social Regulation

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The idea of the good, with affect, is called enthusiasm. This state of mind seems to be sublime, so much so that it is commonly maintained that without it nothing great can be accomplished.

Immanuel Kant

Table of Contents

CHAPTER 1 ..... **11**

INTRODUCTION **11**

A SPARK OF ENTHUSIASM: FROM FIELD EXPERIENCE TO ACADEMIC INQUIRY 12
ENTHUSIASM THROUGH THE AGES 15
From divine inspiration to philosophical suspicion *15*
Enthusiasm as divine madness in ancient Greece *15*
The Enlightenment's wariness *16*
Kant and Hegel: Enthusiasm between reason and progress *17*
Romantic revival: Enthusiasm as creative and emotional vitality *19*
Modern philosophy and enthusiasm: Neglect and critical suspicion *19*
EMPIRICAL FOUNDATIONS: MAPPING THE STUDY OF ENTHUSIASM 20
Empirical evidence from physiological and cognitive research *21*
Empirical evidence from education *22*
Empirical evidence from leadership and organizational contexts *24*
Empirical evidence from consumer behavior *26*
Empirical evidence from political behavior and policy processes *27*
Why enthusiasm matters: Implications for education, business, and society *28*
AIM AND SCOPE: ADDRESSING UNRESOLVED ISSUES AND RESEARCH GAPS 29
OVERVIEW OF THE REMAINING CHAPTERS 31
Chapter 2: The internal structure of enthusiasm *31*
Chapter 3: The appraisal patterns and response types of enthusiasm *32*
Chapter 4: The appropriateness and experience of enthusiasm *32*
Chapter 5: Discussion *33*

CHAPTER 2 ..... **35**

THE INTERNAL STRUCTURE OF ENTHUSIASM **35**

ABSTRACT 36
INTRODUCTION 37
PROTOTYPE ANALYSIS 40
SECTION 1: IDENTIFYING THE CENTRAL FEATURES OF ENTHUSIASM 42

Study 1.1: Generating features of enthusiasm 43
Study 1.2: Centrality ratings 45
Section 2: Validating the enthusiasm prototype 48
Study 2.1: Recall test 48
Study 2.2: Classification and verification speed 51
Study 2.3: Autobiographical recall 52
Relationship between different measures 54
Discussion 56

APPENDIX A 61

CHAPTER 3 63

THE APPRAISAL PATTERNS AND RESPONSE TYPES OF ENTHUSIASM 63

Abstract 64
Introduction 65
Study 1 71
Study 2 80
Discussion 89

CHAPTER 4 95

THE APPROPRIATENESS AND EXPERIENCE OF ENTHUSIASM 95

Abstract 96
Introduction 97
The present research 99
Discussion 109

CHAPTER 5 115

DISCUSSION 115

Summary of the findings 117
Chapter 2: What is the structure of enthusiasm? 117
Chapter 3: What is the profile and distinctiveness of enthusiasm? 118
Chapter 4: Social norms and the experience of enthusiasm 120
Conceptual and practical reflections 121
Towards a working definition of enthusiasm 122
Enthusiasm in contemporary emotion theory 123

The function of enthusiasm *124*
The social dimension of enthusiasm *126*
Is enthusiasm good or bad? *127*
Practical implications: Applying insights on enthusiasm *129*
Conclusion *131*

SUMMARY **133**

SAMENVATTING **139**

REFERENCES **145**

DANKWOORD **161**

CURRICULUM VITAE **163**

Chapter 1

Introduction

... the more his body sank into it the more water ran out over the tub. As this pointed out the way to explain the case in question, without a moment's delay, and transported with joy, he jumped out of the tub and rushed home naked, crying with a loud voice that he had found what he was seeking; for as he ran, he shouted repeatedly in Greek, "Ευρηκα, ευρηκα"

(Vitruvius, 1914, Book IX, Preface)

According to Vitruvius, a Roman architect writing in the late first century before the Common Era, Archimedes had his famous insight while stepping into a bath. This episode is commonly cited as the prototypical example of sudden insight, but it also illustrates the core features of enthusiasm. The idea that occurred to Archimedes did not remain a purely cognitive event; it activated his entire body. He was overcome with positive energy and compelled to act immediately. He felt an urgent need to share his discovery with the world. So intense was this need that he did not even pause to get dressed before running through the streets of Syracuse.

A spark of enthusiasm: From field experience to academic inquiry

During my time as a market researcher, I was tasked with conducting customer satisfaction research for a law firm, using face-to-face interviews as the primary method of data collection. One of these interviews remains particularly vivid in my memory. I was speaking with one of the firm's most prominent clients. I had prepared my questions carefully and was eager to uncover valuable insights. However, after just ten minutes, it became clear that the respondent had no suggestions for improvement. Instead, he spoke with striking energy and positivity about his relationship with the firm. He was openly and unmistakably enthusiastic about the services provided by the law firm.

Despite the respondent's positivity, I experienced a slight sense of panic. Our organization had been well paid to conduct this research, and now it seemed I would have to return to the client empty-handed. The purpose of the interview was to identify concrete

areas for improvement, yet none had emerged. Instead, I was left with a strong but unstructured impression of enthusiasm, an affective state that did not fit easily within the evaluative frameworks we typically used. I was struck not only by the affective force of his response, but by the fact that, as researchers, we had no formal tools to register or understand it.

That something important was being overlooked became evident when I started probing further. In an effort to fill the remaining time, and perhaps find something useful, I began asking questions about the respondent's enthusiasm. Where did it come from? What did he do with it? He then shared that, seven years earlier, the law firm had saved both him and his company. He was still visibly emotional when recounting the experience and explained that, since then, he had referred approximately three new clients per year to the firm. In total, around twenty clients had become customers as a result of his recommendations. Behind his enthusiasm was a compelling narrative, one that we, as researchers, typically failed to uncover or even consider worth exploring.

Around the same time, the Net Promoter Score (NPS) emerged as a new metric for measuring customer engagement. While the use of recommendation-related questions such as "Would you recommend this service to your friends or colleagues?" was already common in market research, the NPS framework introduced a notable shift in emphasis. Specifically, it highlighted the responses at the extreme positive end of a ten-point scale, namely, the scores of 9 and 10, as indicators of particularly strong customer engagement. These high scores were interpreted not merely as signs of satisfaction, but as expressions of enthusiasm.

This conceptual shift resonated with my earlier field experiences. It suggested that enthusiasm might not only be observable in qualitative interviews, but also traceable in large-scale quantitative datasets. Motivated by this insight, I began systematically analyzing the behavior of customers who had provided such high ratings. In doing so, I identified a pattern: People who scored high on enthusiasm shared their positive experiences more often and tended to influence others in their social environment. This line of inquiry ultimately led to the publication of "The Superpromoter" (Vogelaar, 2011), a book in which I explored the role of enthusiastic customers as informal advocates and

agents of growth. The book argued that beyond satisfaction and loyalty, it is enthusiasm that drives meaningful word-of-mouth behavior and emotional contagion within networks. While this work was primarily applied in focus, it marked the beginning of a more systematic investigation into the psychological underpinnings and social functions of enthusiasm.

Over time, and through my work with a range of national and international organizations, I observed that the impact of enthusiasm extended far beyond customer engagement alone. In various corporate settings, simply highlighting the presence of highly enthusiastic customer often had a powerful effect on internal stakeholders. When employees were confronted with genuine, vivid expressions of appreciation and enthusiasm, it appeared to evoke a sense of pride, motivation, and renewed commitment. Gradually, I came to understand enthusiasm as a broader psychological and social force, relevant not only for marketing, but for leadership, employee motivation, and interpersonal dynamics more generally.

Before turning to a formal academic investigation, I developed a conceptual framework to capture the dynamics of enthusiasm in applied contexts. This framework distinguishes three interrelated processes: Flame, Flow, and Flood. Flame refers to the initial spark of enthusiasm. It refers to finding and fanning this flame on a personal and an organizational level, much like the symbolic Olympic flame that burns throughout the Games. Flow represents the state in which this energy is translated into synchronized, productive interaction, as seen in musical harmony or collaborative group performance. Flood captures the social spreading of enthusiasm, as seen in viral ideas, cultural waves, or sudden collective adoption. These insights eventually led to the publication of “The Enthusiasm Trilogy: Flame, Flow, and Flood” (Vogelaar, 2014).

Since the publication of my first book, I had been searching for scientific evidence to support what I observed in practice, but I found surprisingly little. Enthusiasm was rarely examined as a distinct construct within psychological research. After more than a decade of working on customer and employee enthusiasm through applied research, keynotes, and workshops in a variety of international settings, the need for scientific grounding became increasingly urgent. Although I had gathered a substantial amount of empirical insight

through applied work, it lacked the theoretical validation required for academic integration. The absence of conceptual and empirical clarity marked the starting point for a more systematic investigation. The present dissertation is the outcome of that endeavor.

Enthusiasm through the ages

From divine inspiration to philosophical suspicion

The meaning and significance of enthusiasm have changed considerably over the course of human history. What was once considered a form of divine possession gradually evolved into a subject of philosophical debate. In the following section, I offer an overview of how various philosophers and historical figures have addressed the concept of enthusiasm, focusing specifically on those who explicitly use the term or direct equivalents in other languages, such as Begeisterung in German. I have mainly focused on thinkers who treat enthusiasm as a distinct and meaningful phenomenon, rather than as a passing metaphor or secondary theme.

Enthusiasm as divine madness in ancient Greece

In ancient Greece, enthusiasm or enthousiasmos (ἐνθουσιασμός) was closely linked to divine inspiration (Verhoeven, 1972). Derived from éntheos (ἔνθεος), literally "having a god within," the term described a state in which poets, prophets, and orators were believed to speak with divine inspiration. One of the earliest discussions of the concept appears in Plato's short dialogue Ion, in which Socrates converses with the rhapsode Ion, a professional performer of Homer's poetry. In this dialogue, Plato explores the nature of artistic inspiration and distinguishes it from rational expertise (technē), which is based on knowledge and method. Plato compares enthusiasm to a magnetic chain, in which a magnet (the Muse) imparts a divine force to iron rings (poets), enabling them to transmit this energy to others. Enthusiasm was therefore regarded not only as divine inspiration but also as a state intended to pass on divine messages to others.

Socrates observed that most people regard the enthusiastic person as mad or confused (parakinoon), failing to recognize that such a person is filled with the divine (enthousiadzoon). He considered enthusiasm a distinctive form of irrationality, not easily distinguishable from ordinary madness. In Ion, this ambiguity is deliberate, serving to express the vulnerable nature of enthusiasm. By contrasting the seemingly irrational inspiration of poets with the rational expertise of philosophers, Plato emphasized the marginal position of poetry. Poets were excluded from access to true knowledge, which placed their work closer to insanity than to intellectual authority. At the same time, this exclusion reinforced the idea that their achievements were not the result of deliberate method but rather the outcome of divine gifts.

In contrast to Plato's emphasis on divine madness, Aristotle paid less explicit attention to enthusiasm as a separate phenomenon. Yet his distinction between pathos (emotions as experiences that befall us), ethos (character and moral disposition), and logos (reasoned argument) offers a conceptual framework that remains relevant. Whereas Plato located enthusiasm outside rational control, Aristotle situated emotions within a broader view of human agency: emotions arise as pathos, but they gain meaning and direction through ethos, and they can be tempered and articulated through logos. Later commentators, such as Verhoeven (1972), have drawn on this distinction to describe enthusiasm as something that overtakes a person (pathos), yet at the same time involves their active engagement (ethos). Building on this interpretation, enthusiasm can thus be understood not only as active engagement but also as a force that provides direction, since ethos connects emotional energy to orientation and purpose.

The Enlightenment's wariness

The tension between divine inspiration, emotional passion, and rational control continued to echo through late antiquity, the Middle Ages, and the Renaissance, where enthusiasm was alternately celebrated as a sign of inspiration and feared as a source of excess. This longstanding ambivalence set the stage for its eventual critique in the Enlightenment, when enthusiasm came to be regarded with pronounced suspicion, particularly in the English philosophical context (Heyd, 1995). An influential early example was Henry More's "Enthusiasmus Triumphatus" (More, 1656/1966), which

sought to distinguish between true divine inspiration and the delusions of religious fanaticism. This critical stance was later further developed by John Locke, who devoted an entire chapter of "An Essay Concerning Human Understanding" (Locke, 1706/1975) to a critique of enthusiasm, characterizing it as an unrestrained religious zeal based on personal conviction rather than reason, and warning of its dangers to rational inquiry and civil order. David Hume (1741/1987) similarly described enthusiasm in his essay "Of Superstition and Enthusiasm," as a dangerous religious and political passion. However, Hume also recognized that enthusiasm, as exemplified by figures such as Joan of Arc, could inspire admirable courage and significant contributions to society (Coleman, 2012). It should also be noted that even at the height of this distrust there were thinkers who sought to rehabilitate the concept. Among them was Anthony Ashley Cooper, Third Earl of Shaftesbury, who in "A Letter Concerning Enthusiasm" (1708/2001) argued that when tempered by good sense and moral taste, enthusiasm could be a vital and elevating force in human life rather than a threat to reason (Heyd, 1995).

Kant and Hegel: Enthusiasm between reason and progress

Immanuel Kant continued this more nuanced approach, moving further away from the explicitly religious framework that had long shaped the discourse on enthusiasm, yet without entirely abandoning the caution of earlier thinkers. As Lyotard (2009) explains, Kant saw in the enthusiasm of the spectators of the French Revolution a "sign of history," a symbolic indication of humanity's moral capacity for progress.[1] While he distinguished such enthusiasm from dangerous forms of fanaticism, he regarded it as a legitimate and even necessary motivational force, provided it remained under the guidance of reason. As Elster (2021) points out, Kant draws a clear distinction between Enthusiasmus (enthusiasm) and Schwärmerei (often translated as "visionary rapture"). He uses the term Schwärmerei

1. Kant focused on spectators rather than participants because the latter might be driven by personal interest, political ambition, or other motives unrelated to moral principle. Spectators, by contrast, had nothing to gain directly from the events, yet could still feel genuine enthusiasm and moral approval at the struggle for freedom and rights. For Kant, it was precisely this disinterested and morally grounded enthusiasm that revealed a predisposition in humanity toward moral advancement.

to refer to individuals who believe they are directly inspired by God, a view closely aligned with David Hume's understanding of enthusiasm, which Kant regarded as a form of fanaticism. Enthusiasm, by contrast, is sharply differentiated from this concept. Kant (1790/ 1913, p. 122) asserts, "Die Idee des Guten mit Affect heißt der Enthusiasm. Dieser Gemüthszustand scheint erhaben zu sein, dermaßen daß man gemeiniglich vorgiebt: ohne ihn könne nichts Großes ausgerichtet werden" (The idea of the good, with affect, is called enthusiasm. This state of mind seems to be sublime, so much so that it is commonly maintained that without it nothing great can be accomplished), implying that enthusiasm functions as a necessary condition for achieving significant accomplishments[2]. Nevertheless, Kant adds important qualifications to this praise. He warns that enthusiasm can become excessive and describes it as "blind" either in the selection of its goals or the means to achieve them. Even when guided by reason, an enthusiast may pursue morally commendable goals while failing to identify the most effective methods for realizing them. This observation aligns with Béatrice Allouche-Pourcel's (2010, p.105) argument that enthusiasm illustrates the principle that "the best can be the enemy of the good"**.**

As Clewis (2018) explains, Georg Wilhelm Friedrich Hegel offers a link between the Enlightenment's cautious view of enthusiasm and the more positive appreciation that followed. Hegel shared the Enlightenment concern that enthusiasm could become excessive or misguided, but he also saw its potential value. He understood enthusiasm (Begeisterung) as a powerful and meaningful force that could drive important developments in politics and art, as long as it remained connected to reason. In this way, Hegel helped shift the idea of enthusiasm from something dangerous to something that could play a positive role in human progress.

[2] This statement closely parallels Ralph Waldo Emerson's later and more widely known claim in his 1841 essay Circles that "nothing great was ever achieved without enthusiasm," in which he presents enthusiasm as an indispensable force for both personal achievement and societal advancement (Emerson, 1841/2023).

Romantic revival: Enthusiasm as creative and emotional vitality

The Romantic movement, emerging in the late eighteenth and early nineteenth centuries, renewed the celebration of enthusiasm as an authentic expression of creativity, artistic genius, and emotional depth. Enthusiasm was seen not merely as a force to be restrained but as an essential source of inspiration and moral vitality. As Mee (2003) explains, enthusiasm became recognized as a vital emotional influx that poetry channels, necessary for great poetry though requiring regulation to avoid descending into chaotic or misplaced excitement. Romantic poets like Coleridge and Wordsworth sought to balance deep enthusiasm with self-discipline, while Blake embraced it as an all-encompassing power. Furthermore, Jean-Jacques Rousseau, preceding the Romantic era, profoundly influenced these ideals by emphasizing passion and enthusiasm rooted in a direct, uncorrupted connection to nature. Within Romantic thought, enthusiasm also served as a counterpoint to bourgeois values such as rationality and individualism, instead embodying a communal and embodied emotional expression that was central to Romantic poetics (Mee, 2003).

Modern philosophy and enthusiasm: Neglect and critical suspicion

In contemporary philosophy, enthusiasm is rarely treated as a central concept. While earlier philosophical traditions occasionally praised it as a virtue or divine gift, modern thinkers tend to approach enthusiasm with critical distance or outright suspicion, if they engage with it at all. According to Bösel (2008), this attitude may be understood in light of the catastrophic consequences of ideological mass movements in the twentieth century. The Nazi regime, for example, systematically appropriated the language and imagery of collective enthusiasm, transforming it into a political instrument of mass mobilization and control (Kershaw, 2001). This led philosophers to associate intense emotional currents with fanaticism, manipulation, and the erosion of critical judgment.

Besides the suspicion caused by recent political history, some philosophers also critique the role of enthusiasm in consumer culture and the performance-driven ethos of late modernity. Byung-Chul Han (2015) argues that in a society governed by self-optimization and constant positivity, genuine enthusiasm has become rare. The artificial

excitement demanded by employers, he suggests, produces not vitality but exhaustion, contributing to widespread burnout. In the Netherlands, Coen Simon (2014) offers a related critique, warning that enthusiasm often functions as a substitute for genuine knowledge, reducing discourse to loud opinion rather than informed insight. More than forty years earlier, Verhoeven (1972) had already voiced a similar concern. He warned against the commodification of enthusiasm in contemporary culture. According to Verhoeven, it cannot be imposed at will, and the obligation to appear enthusiastic leads to imitation rather than authenticity. What remains is a hollowed version of the phenomenon, shaped less by inner conviction than by social norms and external pressures. Although Verhoeven is critical of inauthentic or externally imposed forms of enthusiasm, he differs from many modern philosophers in ultimately affirming its value. He even calls it indispensable, particularly in education.

Empirical foundations: Mapping the study of enthusiasm

Although much of the research in psychology has traditionally emphasized the adaptive role of negative emotions (Roseman et al., 2020), recent decades have witnessed a growing interest in the functions of positive emotions. Since the emergence of the positive psychology movement, scholars have increasingly highlighted how positive emotions contribute not only to subjective well-being but also to adaptive functioning and resilience (Fredrickson, 2013; Seligman, 2002). This has resulted in extensive studies on awe (Keltner & Haidt, 2003), gratitude (Bartlett & DeSteno, 2006), hope (Averill et al., 1990), joy (Johnson, 2020), and pride (Tracy & Robins, 2007). The broaden-and-build theory (Fredrickson, 2013) provides a unifying explanation by suggesting that positive emotions expand people's thought–action repertoires and build enduring psychological and social resources, thereby enhancing long-term survival prospects and social cohesion.

Although enthusiasm has attracted attention in philosophical debates and evolutionary theorizing, systematic empirical research on this emotion remains scarce. Compared to the other positive emotions mentioned above, enthusiasm has received relatively little focused attention. Nevertheless, some scholars have begun to examine

its distinctive role. The studies that exist are scattered across psychology, education, organizational science, consumer research, political science, and related disciplines, and they vary considerably in their scope and methodology. In the following overview, I compile empirical work in which enthusiasm has been explicitly measured or analyzed, whether as a primary construct or as part of broader investigations.

Empirical evidence from physiological and cognitive research

Physiological research supports the view that enthusiasm functions as an approach-oriented emotion that motivates individuals toward action and engagement. In one study, Shiota et al. (2011) induced five discrete positive emotions (anticipatory enthusiasm, amusement, attachment love, nurturant love, and awe) using autobiographical recall and film clips while recording autonomic nervous system responses such as heart rate, skin conductance, and respiration. Their results demonstrated that enthusiasm had a distinctive physiological profile, consistent with an approach-oriented state preparing individuals for reward seeking and goal pursuit.

Neurocognitive work provides complementary support. Falk (2012), using fMRI in a message-sharing paradigm, found that stronger activation in brain regions involved in reward valuation (ventromedial prefrontal cortex) and social cognition (dorsomedial prefrontal cortex) predicted which messages participants later shared with enthusiasm. These neural signatures suggest that reward and social motivation mechanisms underlie the spread of enthusiastic communication. Extending this communicative perspective, Viegas et al. (2021) introduced the Entheos multimodal dataset of TED Talks and showed that enthusiasm can be reliably recognized through vocal, facial, and textual cues, with multimodal models classifying enthusiasm with high accuracy.

Cognitive research that has examined enthusiasm directly shows that it shapes judgment and decision making in systematic ways. Griskevicius et al. (2010) induced enthusiasm through autobiographical recall and found that participants in this state were more likely to accept weak persuasive arguments, suggesting increased reliance on heuristics in contexts that signal opportunity. Druckman and McDermott (2008) also induced enthusiasm, among other emotions, before asking participants to make risky

choices framed in terms of potential gains or losses. Their results showed that participants experiencing enthusiasm were more willing to take risks and were less influenced by framing effects, highlighting the role of enthusiasm in orienting individuals toward action under uncertainty.

Other studies provide indirect support through investigations of related high-approach positive states. Gable and Harmon-Jones (2008) used picture-viewing tasks with affective stimuli that varied in motivational intensity and measured attentional scope with a global–local letter task. They found that high-approach positive states narrowed attention to goal-relevant cues, contrary to the general assumption that positive affect broadens cognition. Follow-up experiments confirmed that attentional narrowing was driven by motivational intensity rather than valence, occurring for both high-approach positive states and negative states such as disgust, but not for less intense emotions (Domachowska et al., 2016). Price and Harmon-Jones (2010) similarly found that approach-motivated positive affect biased cognitive categorization toward goal-relevant categories, while Gable and Poole (2012) demonstrated that such states led participants to underestimate elapsed time, suggesting that high-approach positive affect accelerates subjective time perception. Although these studies did not measure enthusiasm specifically, their findings are consistent with its motivational profile.

Taken together, both direct and indirect evidence suggests that enthusiasm does not function as a diffuse positive mood but rather as a high-intensity approach state that channels attention, judgment, and decision making toward the pursuit of valued goals.

Empirical evidence from education

The most extensive body of research on enthusiasm has been conducted in educational settings. Early intervention studies examined whether teachers could be trained to display greater enthusiasm. Bettencourt et al. (1983) provided enthusiasm training to teachers and observed their classrooms. Students of trained teachers were more frequently on-task, although improvements in achievement were inconsistent. Streeter (1986) similarly trained teachers and videotaped their lessons, with subsequent student surveys showing that trained teachers' enthusiasm enhanced students' attitudes toward reading.

Beyond these early training efforts, subsequent research has consistently shown that teacher enthusiasm predicts positive student outcomes. Patrick et al. (2000) combined classroom observations with self-reports and demonstrated that enthusiasm was the strongest predictor of students' intrinsic motivation and vitality among a range of positive teacher behaviors, such as knowledge of subject, preparedness, and clarity of presentation.

Wheeless et al. (2011) provided further evidence by surveying 570 university students and examining how instructors' communication behaviors affected students' intent to persist in college. They found that enthusiasm, along with immediacy and perceived similarity, predicted perceived instructor credibility, which was operationalized as students' perception of the instructor's competence, trustworthiness, and caring.
This perceived credibility, in turn, strongly influenced persistence intentions. Among all behaviors studied, enthusiasm made the greatest contribution to credibility. The authors conclude that, beyond boosting motivation and vitality as shown in earlier research, enthusiasm also contributes to students' intent to continue their studies. Moè (2016) experimentally manipulated delivery style by presenting reading passages either enthusiastically or neutrally. Students in the enthusiastic condition recalled more information, reported higher intrinsic motivation, and felt that time passed more quickly. More recently, Valentín et al. (2022) extended this experimental tradition using video-based instruction in elementary schools. Students who viewed enthusiastic teachers reported greater motivation and achieved higher performance than those exposed to neutral delivery.

While these studies highlight the positive effects of teacher enthusiasm on student motivation and performance, other lines of research have focused on clarifying the nature and structure of enthusiasm itself. Kunter et al. (2011) demonstrated that teacher enthusiasm is not a unitary construct but consists of at least two dimensions, enthusiasm for teaching and enthusiasm for the subject matter. Enthusiasm for teaching was more strongly related to teachers' occupational well-being and to classroom characteristics, particularly higher student enjoyment and lower levels of disruption, whereas enthusiasm for the subject matter showed weaker and largely nonsignificant associations.

A growing body of research has also distinguished between experienced and displayed enthusiasm. Keller et al. (2014) analyzed teacher and student surveys with

multilevel structural equation modeling and found that dispositional teacher enthusiasm predicted student interest only when students perceived the teacher as enthusiastic. Keller et al. (2018) extended this approach by identifying four lesson-level profiles that combined teacher self-reports of experienced enthusiasm with student ratings of displayed enthusiasm. Students reported the highest levels of enjoyment when both forms of enthusiasm were high, whereas misalignment between felt and displayed enthusiasm diminished positive outcomes. Interestingly, in the condition where teachers were perceived as enthusiastic but did not report high levels of experienced enthusiasm, students still reported more enjoyment than when enthusiasm was only internally experienced, indicating that enthusiasm needs to be expressed to generate positive effects. However, while the display of enthusiasm benefits students, it may have different implications for teachers themselves. Taxer and Frenzel (2018) found that teachers who displayed enthusiasm without experiencing genuine enjoyment reported poorer occupational well-being. Pretenders reported significantly lower self-efficacy, higher burnout, and lower job satisfaction. These findings underscore that enthusiasm can be highly beneficial for students, but that its expression must also be authentic to support teachers' own motivation and health.

Empirical evidence from leadership and organizational contexts

Enthusiasm has also been examined as a key factor in organizational life, extending from leadership charisma, entrepreneurship, and workplace dynamics. Bono and Ilies (2006) experimentally manipulated leaders' emotional expressions. Leaders who displayed enthusiasm, excitement, and optimism were rated as more effective and put followers in a more positive mood. Damen et al. (2008) reinforced this point by combining experimental manipulations of leader affective displays in speeches with field surveys in organizations. Across both designs, enthusiasm was the only affective display consistently linked to charisma attributions and the transfer of positive affect. More recent evidence extends these findings to group-level processes. Gonçalves et al. (2024) surveyed employees in Portuguese organizations and found that leaders' enthusiasm significantly predicted employees' perceived performance. Importantly, this relationship was largely mediated by higher group satisfaction and more positive emotions within teams, indicating

that enthusiasm operates both through direct influence and by shaping the broader emotional climate. Laguna et al. (2017) further found that enthusiasm both fuels and is fueled by personal resources, as entrepreneurs who reported higher enthusiasm also developed stronger self-efficacy and work engagement over time.

Some studies have examined how enthusiasm shapes workplace dynamics. Basch and Fisher (2000) analyzed events reported by hotel employees and found that enthusiasm was most often elicited by goal achievement, recognition, challenging tasks, and involvement in planning, confirming its strong association with achievement-related events in organizational life. Rego and Cunha (2008) demonstrated that opportunities for learning and personal development significantly increased employees' enthusiasm, which in turn predicted higher self-reported performance. They also found that stress was negatively related to enthusiasm. Extending this line of research, Rego et al. (2009) found that perceptions of camaraderie at work were positively related to employees' enthusiasm. In a complementary vein, diary studies of German employees showed that enthusiasm was consistently triggered by positive work events, particularly goal attainment, problem solving, and task-related success (Ohly & Schmitt, 2015).

While event-based studies show that enthusiasm is triggered by specific work experiences such as goal attainment, recognition, and problem solving, complementary large-scale survey research points to its role as a broader disposition. Peterson et al. (2009) found that zest, defined as approaching life with energy and enthusiasm, was strongly associated with experiencing work as a calling, as well as with greater job and life satisfaction. In addition to these individual- and leader-focused findings, case-based and organizational studies further emphasize the role of enthusiasm in driving team success and collective achievement (Sandberg, 2007; Walker, 2002). Within organizational and group contexts, high-arousal positive states such as enthusiasm have also been shown to be particularly contagious, boosting cooperation and collective performance (Barsade, 2002).

In the context of job interviews, Stollberger et al. (2023) conducted experiments with recruiters in China and found that moderate enthusiasm increased perceived job suitability, whereas excessive exuberance could undermine evaluations when judged as inappropriate. In training settings, Arndt and Wang (2014) found that high instructor

enthusiasm in internet-based sales training improved participant evaluations and significantly increased intentions to apply learned material, although it did not enhance rote memorization.

The authenticity of enthusiasm has also proven important in workplace contexts. Totterdell and Holman (2003) surveyed call center employees and compared "surface acting," in which workers faked enthusiasm, with "deep acting," in which they aligned felt and displayed enthusiasm. Employees who engaged in deep acting reported less exhaustion and greater effectiveness than those relying on surface acting. These findings correspond with research in education (Taxer & Frenzel, 2018) and suggest that enthusiasm is a powerful workplace resource, but only when it resonates with genuine inner states.

Empirical evidence from consumer behavior

It is striking that enthusiasm has received relatively little scientific attention in consumer research, despite its prominence in market research practice where it is often regarded as a key driver of customer engagement and loyalty (Reichheld, 2003; Vogelaar, 2014). The limited number of empirical studies that directly address enthusiasm nevertheless provide valuable insights. So et al. (2014) identified enthusiasm and attention as key components of customer engagement, which through the broader engagement model significantly predicts brand loyalty.

Enthusiasm has also been used to identify distinct consumer segments. Moreo et al. (2022) showed that food enthusiasts engaged in exploratory consumption patterns such as cooking classes, culinary travel, and experimenting with new recipes. In a similar vein, Johnson and Bastian (2015) showed that wine enthusiasm provides a meaningful basis for segmenting the wine market, distinguishing groups based on their knowledge, behavior, and spending. They identified three consumer segments, namely Wine Enthusiasts, Aspirants, and No-Frills drinkers, and found that Wine Enthusiasts consumed more wine, spent more money on it, and were more knowledgeable about wine than the other two groups. Close et al. (2006) further demonstrated that enthusiastic sport fans developed more positive brand attitudes toward sponsors perceived as expert and engaged, which in turn increased purchase intentions. Sandberg (2007) extended this perspective to the

context of innovation, studying five successful Finnish cases (Hi-Fog, Nordic Walkers, Spyder, DyNAzyme, and ePost Letter). The study showed that enthusiasm, originating from informal internal advocates and core teams, spread throughout organizations and to customers, facilitating both innovation processes and market adoption. Together, these findings suggest that enthusiasm not only shapes individual attitudes and behaviors but also functions as a structural variable for understanding consumer markets and plays an important role in innovation and organizational success.

Empirical evidence from political behavior and policy processes

Evidence from political psychology further underscores the unique role of enthusiasm. Marcus and MacKuen (1993) demonstrated that enthusiasm and anxiety are distinct emotions that drive different forms of political behavior. Whereas anxiety stimulated learning and more attentive information processing, enthusiasm mobilized voters by strengthening their candidate preferences and increasing campaign involvement. Brader (2005) showed that enthusiasm cues in political advertisements significantly increased campaign interest and voting intention, while reinforcing prior candidate preferences rather than stimulating critical information processing. Groenendyk and Banks (2014) demonstrated that enthusiasm is not only a driver of political behavior but also rooted in partisan identity, as strong party supporters expressed more enthusiasm when thinking of themselves as party members. Valentino et al. (2011) further found that enthusiasm, although generally weaker than anger, can significantly increase costly forms of political participation such as attending rallies, donating money, or volunteering for campaigns, highlighting its mobilizing potential in democratic engagement. More recently, McLaughlin et al. (2020) showed that enthusiasm plays a central role in polarization during elections. Enthusiasm for one's own candidate strengthens affective polarization, while enthusiasm for the opposing candidate reduces it. Anxiety, in contrast, displays a less consistent pattern: fear of the opposing candidate sometimes increases polarization, but in other contexts has no significant effect.

Extending beyond voter behavior, Pierce (2021) offered a conceptual extension by linking enthusiasm, alongside anger and fear, to major policy process frameworks. Rather than presenting new empirical evidence, the study synthesized existing research

to argue that enthusiasm may not only mobilize voters but also sustain engagement in policy debates.

The following section integrates these empirical findings and discusses why it is important to study enthusiasm by turning to the practical importance of enthusiasm across applied domains.

Why enthusiasm matters: Implications for education, business, and society

The evidence reviewed above indicates that enthusiasm is not merely a pleasant accompaniment to effective action but a psychological resource with wide-ranging implications. In education, enthusiastic teaching enhances student motivation and achievement, with the strongest benefits occurring when enthusiasm is both perceived by students and authentically expressed by teachers. This highlights its dual importance for education: authentic enthusiasm energizes learners while simultaneously supporting teachers' professional engagement and well-being.

In organizational contexts, leader enthusiasm increases perceptions of charisma and strengthens follower engagement. It operates as a mechanism through which transformational and authentic leaders stimulate creativity, encourage collaboration, and build commitment. Yet the same body of evidence also shows that enthusiasm is effective only within certain boundaries. Displays that are excessive or inauthentic may undermine credibility, reduce trust, or harm employee well-being.

Beyond schools and workplaces, enthusiasm also plays a role in shaping markets and societies. Enthusiastic customers are not only more satisfied and loyal but also exhibit higher levels of engagement, which predict more positive brand attitudes, stronger loyalty intentions, and support the spread of innovations. Further, enthusiasm mobilizes citizens in the political domain, encouraging active engagement with policy issues and public debate. Across these settings, enthusiasm operates as a force that amplifies attention, fuels communication, and spreads motivation across networks.

Taken together, these findings highlight that enthusiasm is a core psychological resource. Across diverse domains, it functions as an energizing force that focuses attention,

mobilizes action, and reinforces social bonds. Recognizing its benefits while respecting its boundaries enables education systems, organizations, and societies to harness enthusiasm in ways that promote authentic engagement, sustainable performance, and collective vitality. Despite its evident significance across contexts, research on enthusiasm remains limited, leaving several important questions unresolved. The following section therefore outlines the conceptual and empirical gaps that are addressed in the present dissertation.

Aim and scope: Addressing unresolved issues and research gaps

Although philosophical writings and scattered empirical studies have provided valuable insights into enthusiasm, several important gaps remain. Even at the definitional level, enthusiasm lacks conceptual clarity. Dictionaries typically describe it as an energetic feeling linked to eagerness or excitement, yet they vary in detail and emphasis and rarely address its function or social implications (Cambridge Dictionary, 2023; Collins Dictionary, 2023). Similarly, scholarly work reveals differing views and approaches. Evolutionary and functional models portray enthusiasm as a high-arousal, goal-conducive state that motivates reward-seeking behavior (Griskevicius et al., 2010; Scherer, 2005; Shiota et al., 2014). However, these perspectives focus primarily on the intrapersonal level and remain largely theoretical, with limited empirical evidence. Empirical studies have also operationalized enthusiasm in divergent ways, ranging from behavioral indicators such as vocal animation and gestures to self-reports of enjoyment, humor, or related emotions such as hope and pride (Collins, 1978; Marcus & MacKuen, 1993; Murray, 1983). While these approaches converge on the idea of enthusiasm as a positive, high-energy, goal-oriented state, they also introduce additional elements such as control, humor, or contagious energy, leaving its defining characteristics unclear. Moreover, the interpersonal dimension of enthusiasm has received little conceptual attention, despite findings in education and organizational research showing that displayed enthusiasm strongly influences motivation and performance in others (Keller et al., 2014; Patrick et al., 2000). Taken together, these differing approaches indicate that a bottom-up perspective would be beneficial for understanding how laypeople conceptualize enthusiasm, and which features they perceive

as central. Chapter 2 contributes to filling this gap through a prototype analysis that provides a more coherent and comprehensive account of enthusiasm.

A further challenge concerns the functional role of enthusiasm. Evolutionary scholars have hinted that enthusiasm may serve a distinct adaptive function. Building on Darwin's (1872) view of emotions as evolved adaptations that coordinate responses to threats and opportunities (Frijda, 1988; Lazarus, 1991; Russell, 2003; Scherer, 2009), it has been suggested that negative emotions prepare individuals to deal with danger, while positive emotions facilitate exploration, cooperation, and social bonding (Fredrickson, 2013). Within this framework, enthusiasm seems to fit among the positive emotions that promote exploration and collective motivation. Yet it remains unclear whether enthusiasm represents a distinct emotional state or merely a more intense manifestation of other approach-related emotions. Chapter 3 examines whether enthusiasm can be empirically distinguished from related positive emotions through its underlying patterns of appraisal and response tendencies. This analysis provides a critical test of whether enthusiasm warrants recognition as a distinct emotion. The focus is on how these patterns differentiate enthusiasm from joy and hope, two emotions that are often considered closely related. Demonstrating these differences provides a stronger empirical basis for understanding enthusiasm's motivational profile.

Another unresolved issue concerns the role of social norms in shaping enthusiasm. Although enthusiasm is often defined as a socially expressive and contagious emotion, little is known about how its experience is guided by perceptions of appropriateness across contexts. Research on emotion regulation shows that individuals sometimes downregulate positive emotions to comply with social display rules (Fernandes & Tone, 2021; Gross & Levenson, 1997), yet empirical research for how such norms influence enthusiasm has been lacking. Little is known whether perceived appropriateness consistently predicts experienced enthusiasm, whether this relationship differs across private, work, and public contexts, and how cultural values may shape these dynamics. Chapter 4 addresses this gap by investigating the link between appropriateness and experienced enthusiasm across 51 societies. By testing preregistered hypotheses with large-scale cross-cultural data, the study

clarifies how context-specific social norms and broader cultural dimensions relate to the experience of enthusiasm.

Together these studies provide valuable insights into how enthusiasm can be conceptually defined, how it differs from related positive emotions in terms of underlying mechanisms and behavioral outcomes, and how its experience and expression are shaped by contextual and cultural factors. The remainder of this introduction outlines the structure of the dissertation and briefly summarizes the content of each chapter.

Overview of the remaining chapters

Chapter 2: The internal structure of enthusiasm

This chapter provides a clearer conceptualization of enthusiasm than is commonly found in existing definitions and empirical research. Here we address the question of how enthusiasm can be conceptually defined by identifying its most central features. Although enthusiasm is frequently referred to in both everyday and academic contexts, there is no consensus on its defining characteristics. To address this gap, we applied a prototype analysis approach, a bottom-up methodology that obtains laypeople's views to determine which features are perceived as more or less central to a concept. Across five studies, participants generated and rated features of enthusiasm, and we examined the centrality of these features through recall, recognition, classification speed, and autobiographical recall tasks. With this approach we examine whether enthusiasm has a prototype structure and determine its most defining elements. By using multiple methodological strategies, the chapter provides an empirically grounded conceptualization of enthusiasm that can inform later theoretical and empirical work. The analysis indicates that the fundamental elements of enthusiasm are positive valence, high arousal, goal conduciveness, and interpersonal orientation.

Chapter 3: The appraisal patterns and response types of enthusiasm

In this chapter we examine the question of how enthusiasm can be distinguished from related positive emotions, specifically joy and hope, in terms of underlying cognitive appraisals and response tendencies. Drawing on appraisal theory, which posits that emotions can be differentiated by patterns of appraisal and response tendencies, the chapter investigates which appraisals are most and least strongly associated with enthusiasm. In addition, it examines whether enthusiasm is linked to distinct response types, such as action tendencies, expressions, and thoughts, compared to joy and hope. To address these questions, two studies were conducted. In Study 1, participants evaluated autobiographical episodes to identify the appraisal dimensions associated with each emotion. Study 2 assessed the response tendencies evoked by each emotion in terms of behavioral, expressive, and cognitive outcomes. The findings demonstrate that enthusiasm emerges as a unique emotion, characterized by pleasant intensity, goal orientation, active social engagement, and a profound sense of self-empowerment. It differs from hope and joy through its goal-directed energy and readiness for action.

Chapter 4: The appropriateness and experience of enthusiasm

Chapter 4 addresses the question of how social norms regarding emotional expression, operationalized as perceived appropriateness, shape the experience of enthusiasm across different contexts and cultures. Enthusiasm is a high-arousal, socially expressive emotion that often motivates individuals to share their feelings, yet its expression may be influenced by context-specific social rules. Drawing on cross-cultural and emotion regulation research, this chapter investigates whether appropriateness judgments differ across private, work, and public settings, and whether these judgments predict experienced enthusiasm. Using data from a large-scale and world-wide survey conducted in 51 societies (N = 12,851), participants reported on their frequency of experiencing enthusiasm and their perceptions of how socially acceptable it is to express enthusiasm in each context. Cultural dimensions of individualism and power distance were included to explore how broader societal values relate to these perceptions and experiences. The preregistered analyses demonstrate that appropriateness

judgments play a central role in explaining context-related differences in experienced enthusiasm and reveal systematic cultural variation in the experience of this emotion.

Chapter 5: Discussion

The final chapter integrates the findings of the preceding studies and reflects on what they reveal about the structure, function, and social regulation of enthusiasm. It discusses theoretical and practical implications across education, organizations, and society, and outlines promising directions for future research.

Chapter 2

The Internal Structure of Enthusiasm

This chapter is based on:

Vogelaar, R., Van Dijk, E., & Van Dijk, W. W. (2025a). The internal structure of enthusiasm: a prototype analysis. *Motivation and Emotion, 49*(2), 183–196**.**

Abstract

The term enthusiasm is used frequently in both day-to-day language and professional settings. Scientifically, however, enthusiasm is not clearly defined. It is conceptualized and measured in different ways. In the present research, we examined the internal structure of enthusiasm. First, 28 features of enthusiasm were identified (Study 1.1) and rated on their centrality (Study 1.2). Results showed that features indicating joy and motivation were rated as central to the concept of enthusiasm, whereas features indicating restlessness and impatience were rated as less central. The validity of the central features was supported in three follow-up studies. More specifically, we found that the more central features were recalled better (Study 2.1), recognized faster (Study 2.2), and more often mentioned in autobiographical recalls of enthusiasm (Study 2.3). Taken together, the findings indicate that enthusiasm is prototypically structured, and that prototypical enthusiasm is a positive, energetic feeling that is associated with goal orientation and often involves interpersonal contact.

Introduction

The word enthusiasm originates from the old Greek word “Entheos” and means possessed by a God. In his description of the performances of the rhapsode Lo, Plato first uses the word “enthousiasmós”, when he recites Homerus (Verhoeven, 1972). In this context, enthousiasmós is described as “divine inspiration”. In the 17th century, enthusiasm took on the meaning of “excessive and unbecoming religious”. Nowadays, enthusiasm is generally described as an energetic feeling, related to excitement or eagerness, and aimed at a particular subject of interest or activity. However, a selection of several authoritative dictionaries reveals notable variations in their definitions of enthusiasm, especially in terms of detail and focus. Examples are: “A feeling of energetic interest in a particular subject or activity and an eagerness to be involved in it” (Cambridge Dictionary, 2023); and or “Enthusiasm is great eagerness to be involved in a particular activity which you like and enjoy or which you think is important” (Collins Dictionary, 2023). These definitions seem to agree on enthusiasm being an emotion of high arousal. Yet, the function or goal conduciveness of enthusiasm is not explicitly or uniformly articulated in these descriptions. Notably, social implications of enthusiasm are absent in these dictionary definitions.

Emotions are generally considered to be functional phenomena (Frijda, 1988). Most scholars agree that emotions have an adaptive function, in the sense that emotional responses helped our ancestors survive and reproduce (Lazarus, 1991; Russell, 2003; Scherer, 2009). Within these lines of research, the predominant emphasis has been placed on negative emotions (Roseman et al., 2020). However, since the beginning of the millennium, there has been a notable increase in the focus on positive emotions, coinciding with the emergence of positive psychology, a movement that has highlighted the importance of these emotions in human well-being (Fredrickson, 2013; Seligman, 2002). Although enthusiasm is not yet a major focus in research, recent work highlights the importance of positive emotions such as enthusiasm, shedding light on their role in goal pursuit and adaptive functioning (Milona et al., 2024).

Enthusiasm is sometimes mentioned in scientific models that categorize emotions. To distinguish between the adaptive functions of different positive emotions Shiota et al.

(2014) proposed a taxonomy of eight positive emotions[3]. In their view, goal conduciveness is central to the adaptive function of enthusiasm. So, enthusiasm helps to reach one's goals. These evolutionary psychologists describe enthusiasm as a response to material opportunities, like dogs wagging their tail when anticipating food. They propose that enthusiasm is experienced during anticipation of the reward and serves to motivate appetitive behavior (Griskevicius et al., 2010). This is consistent with research showing that affective stimuli high in motivational intensity (e.g., eliciting enthusiasm or disgust) evoke a narrowed focus of attention irrespective of their positive or negative valence (Domachowska et al., 2016; Gable & Harmon-Jones, 2008). It contradicts the general idea that positive affect is always associated with increased cognitive flexibility and a broadened focus of attention, whereas negative affect is associated with a narrowing of focus (Fredrickson, 2013). In addition, enthusiasm, evoked by recalling a personal experience, facilitated greater acceptance of weak persuasive messages and increased reliance on previously learned strategies and heuristics (Griskevicius et al., 2010). These studies indicate that the adaptive function of enthusiasm is to obtain a reward, so from this perspective goal conduciveness is a central element. This is also consistent with Poggi's view (2007) that enthusiasm is something you feel during or before attaining an important goal, one that is worth pursuing.

In the circumplex model (Russell, 1980), emotions are categorized along two dimensions: valence and arousal. Scherer (2005) added goal conduciveness and coping potential (power/control). In his model, he arranged several frequently used emotions. Enthusiasm was plotted in the positive and high arousal quadrant and in the high power/control and goal conduciveness quadrant. So, according to Scherer enthusiasm is not only positive and high in arousal, but also high in goal conduciveness and high on the power/control dimension. Positivity, high arousal, and goal conduciveness are elements that correspond with the definitions in the dictionaries and the views of other scholars. Power/control is a new element.

Predominantly, these definitions and scientific models used an intrapersonal perspective, concentrating on the beliefs and feelings of those experiencing enthusiasm.

[3]They use the term "PANACEAS", based on the first letter of each of the eight emotion constructs in the taxonomy: Pride, Amusement, Nurturant Love, Attachment Love, Contentment, Enthusiasm, Awe, and Sexual Desire.

What seems missing, is the interpersonal aspect of enthusiasm. Some scholars, such as Poggi (2007), briefly acknowledge the social dimension of enthusiasm, noting that while it is an individual emotion, it is also one that often amplifies and spreads when shared with others. Furthermore, several empirical studies have also incorporated an interpersonal perspective of enthusiasm. Teaching effectiveness research addresses an interpersonal component of enthusiasm by examining the effect of teachers' enthusiasm on students. In this research, enthusiasm has been differentiated in being displayed or experienced (Keller et al., 2016). Experienced enthusiasm is defined as the degree of enjoyment that teachers experience in their professional activities, which may best be seen as an intrapersonal aspect of enthusiasm (Kunter et al., 2008). Displayed enthusiasm refers to nonverbal expressiveness (Collins, 1978) or, more generally, considers enthusiasm to be a component of instructional, and thus interpersonal behavior (Rosenshine, 1970). Studies show that displayed enthusiasm in particular enhances the effectiveness of teachers. One study showed that the dispositional enthusiasm of teachers positively predicted students' interest, but this was fully mediated by the enthusiasm students perceived in their teacher (Keller et al., 2014). In another study, where teacher enthusiasm and 12 other positive teacher behaviors were considered, enthusiasm was the most powerful unique predictor of student's intrinsic motivation and vitality (Patrick et al., 2000). In a business context, instructor enthusiasm in a sales training seminar improved student evaluations and evoked positive change intentions in sales employees (Arndt & Wang, 2014). These studies on teacher and instructor effectiveness highlight the interpersonal component of enthusiasm as a motivator. Whether this also makes the interpersonal element a defining characteristic of enthusiasm is, however, an empirical question.

Empirical research has conceptualized and measured enthusiasm in different ways. In some studies, enthusiasm is measured by observation of nonverbal behavioral indicators, like vocal animation, wide-opened eyes, and demonstrative gestures (Collins, 1978). Other studies included perceptions of humor, showing interest in the subject and pleasure (Frenzel et al., 2009; Murray, 1983), enjoyment (Kunter et al., 2008), contagious energy (Patrick et al., 2000), aggression and boldness (Wheeless et al., 2011). Marcus and MacKuen (1993), investigating the role of anxiety and enthusiasm during election campaigns, examined datasets of different election studies, and used pride, hope, and

sympathy as markers of enthusiasm. On other occasions, enthusiasm is measured via self-reports of feeling enthusiastic (Stolwijk et al., 2017).

Thus, we can conclude that enthusiasm not only lacks a uniform definition across dictionaries. Within the scientific literature, enthusiasm has been conceptualized and measured in different ways. While there is a consensus that enthusiasm typically embodies a positive, high-energy state, and most agree that enthusiasm has some level of goal orientation, additional factors are also mentioned, such as power or control (Scherer, 2005), humor (Murray, 1983), or hope (Marcus & MacKuen, 1993). The interpersonal element of enthusiasm is absent in most views, even though research on teacher and instructor effectiveness suggest that it might be important. So, what are the crucial features of enthusiasm? While the definitions and empirical studies have all incorporated general and more specific features, we believe the field is served by a bottom-up approach to assess which elements people see as central to the concept of enthusiasm. By stepping away from the factors typically highlighted in academic literature, this method opens up avenues for uncovering new, potentially important, associations that may have been unexplored in prior research. This strategy is particularly effective in revealing underrepresented aspects or "blind spots" in the field. To get a better understanding of the conceptualization of enthusiasm, we systematically grouped the spontaneous responses from our participants into coherent categories, employing a prototype analysis that has successfully been used in different research domains (e.g., Gregg et al., 2008; Hassebrauck, 1997; Hepper et al., 2012).

Prototype analysis

To study enthusiasm, it is useful to start with a clear concept. Ideally, a concept can be defined with a limited number of necessary and sufficient elements. However, many concepts, like enthusiasm, have fuzzy boundaries. Some examples may describe enthusiasm better than others and some features are more central than others. The goal of prototype analysis is to gain insight into the cognitive representation of a concept. Prototype analysis assumes that “knowledge about any given category is structured around, and represented in long-term memory as, a *protype* which captures the meaning of the

category" (Cantor et al., 1982, p. 46), with the heart of the analysis being a "list of features or attributes generated by naive subjects as typical of that class of situations" (p. 50). Its reliance on the free generation of features by laypeople is considered to be one of the major strengths of this approach, as it allows to identify features that have not (yet) been identified in the literature. Furthermore, the method distinguishes between features that are more strongly related (i.e., more central) to a prototype and features that are less strongly related (i.e., more peripheral). While central features form the core of a concept, peripheral features reflect the broader and more flexible boundaries of the construct. Although peripheral features are less defining, they help capture the full complexity and variability of the concept.

We reasoned that, with these methodological advantages, prototype analysis could provide valuable insights for studying an under-researched emotion like enthusiasm. This decision was also inspired by previous studies that documented its value in gaining a better understanding of the concepts of emotion (Fehr & Russell, 1984), love (Fehr & Russell, 1991; Regan et al., 1998), modesty (Gregg et al., 2008), commitment (Fehr, 1988), forgiveness (Kearns & Fincham, 2004), gratitude (Lambert et al., 2009), hope (Luo et al., 2022), nostalgia (Hepper et al., 2012), vengeance (Elshout et al., 2015), and greed (Seuntjens et al., 2015).

For a concept to have a prototype structure, two conditions have to be met (Rosch, 1975). First, it should be possible to identify different features of the concept and to determine the centrality of each feature. Second, the prototype structure should influence information processing. To test these requirements for the concept of enthusiasm, we conducted five studies following the prototype analysis procedure (Elshout et al., 2015; Gregg et al., 2008; Hassebrauck, 1997; Hepper et al., 2012; Luo et al., 2022; Seuntjens et. al., 2015). To identify the different features of the concept, we asked participants to generate different features of enthusiasm (Study 1.1) and to rate the centrality of these features (Study 1.2). In Studies 2.1 and 2.2 we followed the approach that is commonly used in prototype analyses to validate the centrality structure by studying its impact on information processing via recall, recognition, classification speed, and reaction time measures. Furthermore, Study 2.3 provided ecological validity, by examining

autobiographical recall of central versus peripheral features. All studies were approved by the Leiden University ethical committee[4].

Section 1: Identifying the central features of enthusiasm

In this first section, we identified the different features of enthusiasm and determined their centrality. In Study 1.1, participants were asked to list features of enthusiasm. To generate a wide array of features we approached two distinct groups: a representative sample of the general public and a group of professionals. These features were then compiled into categories (from then on referred to as 'features'). Following the commonly used procedure in prototype analysis (Elshout et al., 2015; Gregg et al., 2008; Hassebrauck, 1997; Hepper et al., 2012; Seuntjens et al., 2015), the centrality of these features was rated in a subsequent study (Study 1.2).

[4] Approval numbers: Study 1: CEP18-1204/468, Study 2: CEP19-0705/380, Study 3: CEP19-1124/556, Study 4: CEP19-1011/499, Study 5: CEP19-0708/386.

Study 1.1: Generating features of enthusiasm

Method

Participants and procedure. Participants were 151 Dutch members of an online research panel[5] (M_{age} = 43.14 years, *SD* = 14.63, 62.9% female, 37.1% male)[6]. Additionally, the first author presented the studied material to his professional network via social media, resulting in another 100 Dutch people participating. No background questions were posed to these additional participants. The sample size of 251 participants (151 from the research panel, and 100 from the professional network) and the relative overrepresentation of female participants (62.9%) aligned with sample sizes and gender distributions of previous prototype analyses (e.g., Elshout et al., 2015; Gregg et al., 2008; Hepper et al., 2012; Hassebrauck, 1997; Seuntjens et al., 2015). All participants were asked to list in five minutes, all features of enthusiasm that came to mind with a maximum of 25 features. Thereafter, all mentioned features were compiled into categories of features by independent coders.

Results and discussion

Data from 23 online panel participants were excluded. These participants did not mention any features or provided nonsense answers. The 128 remaining participants described 608 features (*M* = 4.75, *SD* = 3.02, range 1-22). The 100 social media participants generated 1179 features (*M* = 11.79, *SD* = 5.42, range 3-25). Participants generated a large range of features and none of the features was mentioned by all participants. Following the procedure of Hepper et al. (2012), descriptions that contained more than one related statement were divided into separate "units of meaning". An item like "You are happy and motivated to do something" was divided into "Being happy" and "Motivated to do something". This resulted in 5 extra features for the online panel (*N* = 613, *M* = 4.79, *SD* = 3.07) and 13 extra features for the professionals (*N* = 1192, *M* = 11.92, *SD* = 5.41). Next, we removed 6 features that were mentioned twice by the same participant in the

[5]We invited participants via research panel DYNATA. This panel consists of 360,000 Dutch panelists, who are recruited via different sources. Panelists receive panel points for their participation. Depending on the source, panel points can be worth money, discount coupons, or donations to self-selected charities. Participation is voluntary and anonymous.

[6] For all our experiments we followed the guidelines for sample size to recruit at least 50 participants per condition (Simmons et al., 2011). In all our studies we recruited at least 75 participants.

panel. This resulted in a set of 607 features (N = 607, M = 4.74, SD = 3.02). In the professionals' data, we removed 9 features that were mentioned twice, resulting in 1183 features (N = 1183, M = 11.83, SD = 5.36). The observed variation in the number of features identified may be attributable to the differing backgrounds of the respondents and their level of interest in the subject. The initial group predominantly consisted of highly educated Dutch professionals with a professional interest in enthusiasm. The second group consisted of participants in an online research panel, representative for the Dutch population. This could also explain why the number of features mentioned by the last group was lower than some other prototype analyses; 7.55 (Hepper et al., 2012), 8.52 (Hassebrauck, 1997), 8.51 (Seuntjens et al., 2015), 12.28 (Luo et al., 2022). Typically, these earlier studies involved psychology students, a demographic that is not only highly educated but also presumably more engaged and interested in such topics.

Next, two independent coders grouped identical features (e.g., excitement and excitement), features that are semantically similar (e.g., excitement and exciting), synonyms (e.g., exciting and rousing), or have a similar meaning (e.g., excitement and arousal). Together with the first author, they solved discrepancies by discussion. They then established a set of 28 categories, plus a separate category for synonyms of enthusiasm[7], and a category for features that did not fit any of the other categories, with the intention to exclude these last two categories afterward.

From this point forward, we decided to use the results obtained from the panel respondents for further analyses, owing to their greater representativeness of the broader population. We explored whether individuals with a professional interest would generate different features. A Spearman's rank-order correlation indicated a positive relationship between the rankings of the two groups, suggesting substantial agreement ($\rho(28)$ = .40, p = .034). Additionally, a Wilcoxon Signed Ranks Test revealed no significant differences in the relative ranking of features between panelists and professionals (Z = -.036, p = .971). This supports the conclusion that the prototype structure of enthusiasm is similarly recognized by both groups. Having established a set of categories that effectively grouped

[7]Dutch synonyms for enthusiasm are *geestdrift* or *begeesterd*. These Dutch terms are derived from the German word Begeisterung, which shares the same root meaning as enthusiasm.

the data from both the panelists and the professionals, the next phase involved proceeding with data from a group of respondents representative of the general population.

A new pair of independent raters were then asked to assign the original 607 features, generated by the online panel, to this set of 28 categories[8]. We de-duplicated identical words from the original set. This resulted in a set of 202 different features. The inter-rater reliability between the coders was substantial ($\kappa = 0.72$). This suggests that this set of categories was suited to further investigate the prototype structure.

To summarize, participants in this study were able to generate a range of different features of enthusiasm. Thereby one of the conditions for a prototype structure has been met. The generated features were compiled into 28 categories. From here on, these categories are referred to as features, whereas features that are part of this feature-category are referred to as exemplars (see Table 1). In the next study, we assessed how a new sample of participants rated these features in terms of centrality, that is the extent to which they considered these features related to enthusiasm[9].

Study 1.2: Centrality ratings

Method

Participants and procedure. Participants were a new sample of 204 Dutch people recruited via the same online research panel as Study 1.1 (M_{age} = 46.39 years, *SD* = 16.79, 51% female, 49% male).[10] The 28 different features obtained in Study 1.1 were presented in random order, each accompanied by up to four exemplars. Participants rated the centrality of each feature to enthusiasm on a 7-point scale (1 = *not at all related*, 7 = *extremely related*).

[8]In our study, we used categories defined by both professionals and an online panel. However, the final categorization of features was exclusively based on the input from the online panel. This methodology resulted in certain categories being infrequently mentioned, as detailed in Table 1. Notably, the category 'Together' was considered relevant due to its mention 13 times by professionals, despite its minimal mention (only once) by the online panel participants.

[9]The features were translated by a professional translator. The original Dutch features, the examples and their English translations are listed in Appendix A.

[10]Again, the first author invited people from his own online social network to participate. This time 326 people participated (M_{age} = 44.85 years, *SD* = 9.99, 42.6% female, 57.4% male). There was a strong correlation between the centrality ratings of the online panel participants and this group, $r(27) = 0.733$, $p < .001$. Providing an indication of the robustness of the results.

Table 1

Prototype features of Enthusiasm, Exemplars, Centrality Ratings (Study 2), Frequencies (Study 1)

Feature	Exemplars	Study 2		Study 1
		Centrality Rating		Frequencies
		M	*SD*	*N*
Joy	Cheerful, Joy, Upbeat, Good mood	5.52	1.27	136
Motivation	Motivated, Driven, Keen, Going for it	5.52	1.23	52
Good feeling	Fine feeling, Enjoy, Good atmosphere	5.44	1.19	15
Eager	Keen on, Looking forward, Feeling like it	5.43	1.19	20
Positive	Positivity, Optimism	5.42	1.30	21
Laughing	Smiling, Jovial, Beaming, Radiant	5.41	1.22	28
Passion	Mad about, Love	5.40	1.36	13
Pleasurable	Nice, Fun	5.37	1.21	15
Honest	Sincere, Authentic, Real, Fair	5.36	1.41	4
Bursting with	Talking about it, sharing, telling, brimming with	5.33	1.36	14
Kind	Friendly, Empathetic, Sociable, Warm	5.28	1.35	15
Curious	Interested, Eager to learn, Wanting to know everything	5.26	1.09	11
Freedom	Free, Uninhibited, Broad-minded	5.26	1.39	3
Energy	Energetic, Energy level, Strength, Power	5.25	1.29	20
Happiness	Moment of happiness, Contented, Satisfied.	5.22	1.43	11
Active	Lively, Enterprising, Taking action, Pressing ahead	5.14	1.28	23
Spontaneous	Spontaneity, Without thinking	5.09	1.32	10
Anticipation	Hopeful, Dream, Wish, Hope	5.08	1.28	6
Affecting others	Convincing, Motivating others, Taking along, Winning over	5.07	1.37	17
Inspiration	Inspired, Inspiring	5.07	1.31	4
Presence	Radiating, Charisma	5.00	1.43	3
Together	Collaboration, Cooperation, Team, Connection	4.92	1.37	1
Creative	Ideas, New	4.90	1.45	4
Exuberant	Exhilarated, Ecstatic, Excited, Fervent	4.77	1.50	31
Result	Winning, Progress, Achievement	4.76	1.44	6
Restless	Talking loudly, Fidgety, Nervous, Tension	4.11	1.63	41
Impatient	Unable to wait	4.09	1.68	6
Unaware	Youthful, Naive, Unrestrained, Beginner	3.61	1.59	4

Results and discussion

The mean centrality ratings and standard deviations per feature are listed in Table 1. Following Hassebrauck (1997) and Hepper et al. (2012), we examined the intraclass correlation (ICC) across participants' ratings of centrality. We first transposed the data to compute this measure of reliability, whereby the 28 features were used as cases and the respondents as items. This analysis showed that participants' responses were very coherent, (ICC = 0.97, $p < .001$, 95% CI = [0.95, 0.98].

We expected the centrality ratings to correlate positively with the frequencies of the features in Study 1.1, as these are both indicators of the prototype structure. We indeed found a positive relation between centrality and frequency, $r_s(27) = 0.46$, $p = .013$.

Following prior prototype research, we used the centrality ratings to categorize features in two distinct categories: "central" and "peripheral" features. The participants considered the 14 central features to be more closely related to enthusiasm, whereas the 14 peripheral features were considered less related to enthusiasm (see Table 1)[11].

The obtained features are congruent with the views that enthusiasm is a positive (joy, good feeling, positive), goal oriented (motivation, eager, curious), and high arousal state (energy, passion, bursting with). The interpersonal element of enthusiasm, which was absent in most views, is also represented by different central features (honest, kind), and several exemplars of the central feature 'bursting with', such as talking about it, sharing, and telling, as well as some of the peripheral features (affecting others, together). The different features and their congruence with other views will further be discussed in the general discussion.

[11] It is important to acknowledge that the terms "central" and "peripheral," as used in this context, may imply a dichotomy. However, in reality, they represent relative differences in the extent of relatedness to enthusiasm. For the purposes of this study, we use these terms in alignment with the methodology established in previous prototype analysis research (e.g., Hepper et al., 2012).

Section 2: Validating the enthusiasm prototype

In this second section, we validated the prototype structure by measuring recall and recognition of the central and peripheral features of enthusiasm. When a concept has a prototype structure, central features are more accessible in memory than peripheral features (Cantor & Mischel, 1977), although sometimes peripheral words might be remembered better because they deviate from what is expected (Stangor & McMillan, 1992). We hypothesized that central features, due to their cognitive accessibility, would be better remembered and more often falsely recognized than peripheral features. Prior research (e.g., Hassebrauck, 1997; Hepper et al., 2012; Luo et al., 2022; Seuntjens et al., 2015) has demonstrated that the activation of a prototype results in heightened accessibility of central features, leading to both greater recall accuracy and an increased likelihood of false recognition.

Furthermore, people are faster at classifying features that are central to a prototype (Hassebrauck, 1997; Hepper et al., 2012). Also, people mention central features more often than peripheral features when they describe a real-life experience involving the concept (Hepper et al., 2012). These elements of a prototype analysis were tested in three subsequent studies. First, we tested if central features of enthusiasm were recalled and recognized better than peripheral features (Study 2.1). Then we measured differences in reaction time and tested if central features were recognized faster than peripheral features (Study 2.2). Finally, we examined if central features were more present in autobiographical recalls of enthusiasm (Study 2.3).

Study 2.1: Recall test

Method

Participants and procedure. Participants were 152 Dutch people of 18 years and older (M_{age} = 49.78 years, SD = 15.91, 51% female, 49% male); a new sample of the same online research panel that was used in Studies 1.1 and 1.2. The included features were selected based on the ratings of Study 1.2. The obtained 28 features were divided into two sets of 14 features, whereby each set contained 7 central and 7 peripheral features. The mean centrality ratings of the two sets did not differ for the central features (Set 1:

M = 5.37, SD = 0.09; Set 2: M = 5.38, SD = 0.09; t[12] = 0.03, p = .978) or peripheral features (Set 1: M = 4.77, SD = 0.47; Set 2: M = 4.78, SD = 0.54; t[12] = 0.03, p = .979).

To activate the enthusiasm prototype, participants were randomly assigned to one set and exposed for four seconds to a sentence containing one of the features and the word enthusiasm (e.g., "Enthusiasm is related to joy"). The order of the 14 statements was randomized. Next, participants were presented with a short, unrelated questionnaire as a filler task. Subsequently, they were asked to write down all the presented features they could remember (free recall for three minutes). The purpose of this last part was to test whether central features were more often freely recalled and more often falsely recalled than peripheral features. Next, for the recognition task, participants were presented with all 28 features, including the 14 non-presented features of the other set. Participants were asked to indicate whether a feature had been included in the presented set. These responses were used to compute indices for correct and false recognition of central features and correct and false recognition of peripheral features.

Results and discussion

Free recall. We compared central and peripheral features on free recall. Because the data were not normally distributed, we conducted a Wilcoxon signed rank test. Participants did not correctly recall more central (M = 1.80, SD = 1.55) than peripheral features (M = 1.61, SD = 1.50), Z(151) = –1.50, p = .134. Central features, however, were more often falsely recalled (M = 0.30, SD = 0.64) than peripheral features (M = 0.13, SD = 0.58), Z(151) = –3.54, p < .001.

Recognition data. The recognition data were also not normally distributed, so again, we conducted a Wilcoxon signed rank test. Participants correctly recognized more central (M = 5.36, SD = 1.64) than peripheral features (M = 4.82, SD = 1.59), Z(151) = –4.33, p < .001. They also falsely recognized more central (M = 3.43, SD = 2.02) than peripheral features (M = 2.41, SD = 1.89), Z(151) = –6.28, p < .001.

To further assess participants' ability to discriminate between central and peripheral features and to control for response bias, we applied Signal Detection Theory (SDT; Pollack, 1970). SDT provides a framework for distinguishing between participants' ability to differentiate signal (e.g., previously presented features) from noise (e.g., new,

non-presented features) and their tendency to respond affirmatively regardless of accuracy. Especially relevant for the current purposes are the parameters that assess Criterion *C* (response bias) and *A'* (discrimination ability) [12]. The Criterion *C* assess whether participants show a general tendency towards saying that they recognized a feature; in the current analyses a negative value would indicate that they would tend to say that they recognized a feature. Prototype analyses would assume that features that are part of the prototype are more often correctly and incorrectly recognized, which would imply a negative *C* value. Prototype analyses do not explicitly state that people are less able to recognize whether they had or had not seen a central feature. But because analyses do assume that false recognition is higher for central than for peripheral features, it is interesting to test whether that also leads to a higher *A'* value for central features.

The results on Criterion C ($M = –0.33$, $SD = 0.38$) showed that participants overall – i.e., for central and peripheral features – more often stated that they recognized the features. This accords with the notion that features that belong to the prototype are more often – truly and falsely – recognized. The results for *A'* showed that discriminatory value was lower for central features ($M = 0.65$, $SD = 0.11$) than for peripheral features ($M = 0.70$, $SD = 0.11$, $Z = –3.33$, $p < .001$. Participants thus discriminated less between central features they had versus had not seen. This accords with the assumption of prototype analyses that especially central features are not only correctly but also incorrectly recognized.

In summary, while no significant difference was observed in the correct free recall of central and peripheral features, the higher rate of false recall and recognition for central features aligns with the expected prototype structure of enthusiasm. These findings suggest that central features occupy a more prominent role in the cognitive representation of enthusiasm, leading to both greater recognition and a higher susceptibility to errors in recall and recognition.

[12] *A'* was calculated based on hit rate (H) and false alarm rate (FA) using the following formulas: If H > FA, $A' = 0.5 + ((H – FA) \times (1 + H – FA)) / (4 \times H \times (1 – FA))$. If H = FA, $A' = 0.5$. If H < FA, $A' = 0.5 + ((FA – H) \times (1 + FA – H)) / (4 \times FA \times (1 – H))$. Chance performance yields an A' of 0.5, while perfect discrimination yields an A' of 1.0. Criterion *C* was calculated using the formula $C = – ((H – FA) / (H + FA – 2 \times H \times FA))$, where negative values indicate a tendency to respond "yes" more frequently, and positive values reflect a more conservative response tendency. See for similar applications e.g., Baumann & Kuhl (2002) and Bolte et al. (2003).

Study 2.2: Classification and verification speed

Method

Participants and procedure. Participants were 160 Dutch Leiden University students (M_{age} = 21.80 years, *SD* = 3.04, 82% female, 18% male). Participants received €1,- compensation for their participation. Participants were informed that they took part in a reaction time study, and they were asked to respond as quickly as possible. Before the actual experiment started, they were presented with 10 practice trials in which they had to respond whether a word (e.g., cheese, guitar) was or was not related to food by typing an 'F' for Yes, and a 'J' for No. After this, participants proceeded to the actual study. Participants were presented with 28 features of enthusiasm (14 central, 14 peripheral) plus 28 control features (tree, dog, clock, and the like). All features were presented in a random order. After each feature, participants were asked to indicate whether this could be considered a feature of enthusiasm or not, by typing an 'F' for Yes, and a 'J' for No. We counted the number of times the features were identified as enthusiasm and recorded the speed of the Yes responses, as we were only interested in the classification speed of features that were classified as enthusiasm. The verification speed of control features was not considered since these features are not related to enthusiasm and therefore were hardly ever classified as enthusiasm.

Results and discussion

Data from one participant were removed from the analysis. This participant indicated enthusiasm every time a control word was shown and indicated not-enthusiasm when one of the enthusiasm features were shown. Most likely, this participant misunderstood the instructions. Analyses were thus conducted with data from 159 participants.

Classification. In the analyses, we first compared the percentages of central, peripheral, and control stimuli, indicated by participants as features of enthusiasm. As the data were skewed, we used non-parametric tests. Results showed a main effect of feature type, Friedman $X^2(2, N = 159) = 311.79$, $p < .001$. Central features (M = 87.06%, SD = 11.95) were more often classified as enthusiasm than peripheral features (M = 62.85%, SD = 14.79), Wilcoxon's $Z(158) = -10.65$, $p < .001$, and control features (M = 7.86%, SD = 9.36),

Wilcoxon's $Z(158) = -10.95$, $p < .001$. Moreover, peripheral features were more often classified as enthusiasm than control features, Wilcoxon's $Z(158) = -10.95$, $p < .001$.

Response time. In the subsequent analysis, we concentrated on comparing the response times. Our interest was specifically in the response times of features identified as enthusiasm. Consequently, we limited our focus to the response times of affirmative responses (verification speed), as negative responses do not reflect the prototypical characteristics of enthusiasm. Following prior research (Elshout et al., 2015; Hepper et al., 2012; Seuntjens et al., 2015), we recoded extremely fast (< 300 ms) responses to 300 ms, and extremely slow (> 3000 ms) responses to 3000 ms. Of the total of 8,960 responses, 11 responses (0.1%) were extremely fast and recoded to 300 ms, and 63 responses (0.7%) were extremely slow and recoded to 3000 ms. The data were skewed, so we used non-parametric tests. Of the features that were classified as enthusiasm, central features ($M = 788.77$ ms, $SD = 207.98$) were faster classified than peripheral features ($M = 917.07$ ms, $SD = 299.45$), Wilcoxon's $Z(158) = -8.58$, $p < .001$.

To summarize, participants classified more central features as related to enthusiasm than peripheral features. Moreover, they were faster in classifying central features than peripheral ones. Participants also classified more peripheral features to enthusiasm than control features. This suggests that peripheral features are also part of the prototype, even though they are less prototypical than central features.

Study 2.3: Autobiographical recall

Method

Participants and procedure. Participants were 153 Dutch people of 18 years and older, a new sample of the same online research panel as studies 1.1, 1.2, and 2.1, ($M_{age} = 44.35$ years, $SD = 15.13$, 47% female, 53% male). Participants were randomly assigned to the enthusiasm condition ($n = 78$) or control condition ($n = 75$). In the former, they were asked to describe an autobiographical situation in which they experienced enthusiasm, whereas in the latter they were asked to describe a normal weekday. In doing so, we followed the standard approach for prototype analyses (e.g., Elshout et al., 2015; Hepper et al., 2012; Luo et al., 2022; Seuntjens et al., 2015). Participants were instructed to provide detailed descriptions, including what they felt, where they were, who they were

with, the nature of the situation, and when it occurred. Subsequently, participants in both conditions rated the extent to which each of the 28 features was present in that situation on a 10-point scale, ranging from 1; 'not at all' to 10; 'very much'.

Results and discussion

Fourteen participants (ten in the enthusiasm condition, and four in the control condition) gave nonsense responses (e.g., "eiidjd"). Ten participants (six in the enthusiasm condition, and four in the control condition) gave non-relevant answers for the purposes of this research (e.g., "I am sick and therefore never enthusiastic", "I don't know", "That's private"). Data from these 24 participants were not included in this analysis. Reported analyses were conducted with data from 128 participants (62 in the enthusiasm condition, and 66 in the control condition; M_{age} = 45.32 years, SD = 15.34, 48% female, 52% male). The responses provided by these participants were reviewed and considered appropriate for further analysis as they consisted of descriptions of situations.

Autobiographical recall. A 2 (Condition: enthusiasm versus control) × 2 (Feature: central versus peripheral) mixed ANOVA, revealed a main effect of Condition, $F(1, 126) = 12.59$, $p = .001$, $\eta_p^2 = .09$).

Table 2

Ratings of Central and Peripheral Features in Enthusiasm and Control Condition

	Enthusiasm condition		Control condition		Condition total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Central features	8.03	1.46	7.03	1.78	7.51	1.70
Peripheral features	6.92	1.43	6.00	1.69	6.45	1.63
Features total	7.47	1.37	6.52	1.65	6.98	1.59

Participants indicated that enthusiasm features were more present in the enthusiasm condition than in the control condition. We also found a main effect of feature type indicating that central features were indicated to be more present than peripheral features, $F(1, 126) = 143.88$, $p < .001$, $\eta_p^2 = .533$. The interaction effect was not significant, $F(1, 126) = 0.21$, $p = .645$, $\eta_p^2 = .002$. Both central features, $t(123.88) = 3.47$, $p = .001$, $d = 0.29$ and peripheral features, $t(126) = 3.29$, $p = .001$, $d = 0.28$ were rated more present

in the enthusiasm condition than in the control condition. In the enthusiasm condition, central features were mentioned more often than peripheral features, $t(61) = 9.42$, $p < .001$, $d = 0.12$. While this further supports our reasoning, it should be noted that the interaction is not significant, as in the control condition, central features were also rated as more present than peripheral features, $t(65) = 7.75$, $p < .001$, $d = 0.13$. A post hoc explanation could be that the recall of a normal weekday may generate similar patterns (although to a lesser extent) as the recall of enthusiastic events, a finding that could emerge if – when recalling events people to some extent include events that sparked their enthusiasm. In this respect, it may be interesting to note that a recent prototype analysis on hope (Luo et al. 2022) found a similar pattern in their study on the autobiographical recall of hope versus an ordinary weekday. Follow-up research could be used to assess whether this explanation holds.

To summarize, compared to the control condition, both central features and peripheral features were indicated to be more present in situations in which enthusiasm was recalled. Moreover, central features were indicated to be more present than peripheral ones. This study therefore suggests that both central and peripheral features are part of the prototype structure of enthusiasm and that central features are more essential. By asking participants to recall and describe personal experiences, this study highlights that the cognitive representation of enthusiasm closely aligns with how the emotion is naturally felt and expressed.

Relationship between different measures

In the present research, we obtained several different measures related to the internal structure of enthusiasm; for each of the 28 features, we obtained frequencies (Study 1.1), centrality ratings (Study 1.2), correct recognition (Study 2.1), false recognition (Study 2.1), reaction time (Study 2.2), classification (Study 2.2), and presence in the autobiographical recall (Study 2.3). If the enthusiasm prototype has a consistent internal structure, one would expect that these different measures are related. To test this, we analyzed the correlations between the scores of the 28 features in the current five studies (Table 3).

Table 3

Correlations (Spearman's Rho) Among measures of Internal Structure

	Study	1	2	3	4	5	6	7
1 Frequencies	1.1	1	.46*	-.01	.285	-.40*	.52**	.12
2 Centrality rating	1.2		1	.41*	.61**	-.77**	.72**	.70**
3 Correct recognition	2.1			1	.57**	-.57**	.43*	.46*
4 False recognition	2.1				1	-.75**	.80**	.52**
5 Reaction time	2.2					1	-.86**	-.59**
6 Classification	2.2						1	.40*
7 Autobiographical recall	2.3							1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Results largely confirmed the internal structure. We found significant correlations between almost all of the measures. These consistencies provide further support for the prototype structure of enthusiasm. Only the frequencies of features did not correlate significantly with correct recognition and false positive recognition, and the features indicated as being present in the autobiographical recall. This is partly consistent with the results in a prototype analysis of vengeance (Elshout et al., 2015), where the correlation between frequencies and correct recognition was also low. A possible explanation is that particular (less prototypical) words stand out because they are used less often in relation to enthusiasm. Such words might not be mentioned frequently when thinking of enthusiasm while being recalled because they are notable, and memory researchers have shown that words are better memorized when they deviate from what is expected (Stangor & McMillan, 1992).

Discussion

We examined the prototype structure of enthusiasm in five studies. Results of the first two studies showed that features like joy, motivation, and a good feeling were rated as central to the concept enthusiasm, whereas features as restless, impatient, and unaware were rated as less central (e.g., peripheral). The validity of the central features was supported in three follow-up studies. More specific, we found that central features were more often recalled, and as the signal detection analyses corroborated, more often – both correctly and incorrectly – recognized (Study 2.1). They were more often and faster classified as a feature of enthusiasm (Study 2.2), and more often mentioned in autobiographical recalls of enthusiasm (Study 2.3). We also found that the internal structure of the prototype was consistent throughout the different studies. Based on our current findings, we can conclude that enthusiasm is prototypically structured, and that prototypical enthusiasm is a positive, energetic feeling that is associated with goal orientation and often involves interpersonal interactions. Our research both aligns with established knowledge and contributes new insights, particularly regarding the social aspect of enthusiasm and the nuances of its association with power and control. These novel insights are plausibly attributable to the bottom-up approach implemented in the prototype analysis methodology.

The enthusiasm prototype

A first core element of the prototype of enthusiasm is a positive valence. Almost all obtained features have positive connotations. Only three of the peripheral features might be considered as negative (restless, impatient, and unaware), although some exemplars of the feature 'unaware' could be considered as positive in valence (youthful, unrestrained). Although positive valence is not an integral part of the definition of enthusiasm in dictionaries, our findings show that it is a central part of the prototype structure of enthusiasm. Most scientific views agree that positive valence is an important element of enthusiasm (Scherer, 2005) or generally categorize enthusiasm as a positive emotion (Griskevicius et al., 2010; Poggi, 2007).

A second core element of the enthusiasm prototype is high arousal. Our results indicate that the feature 'energy' is a central element of enthusiasm. Moreover, many of

the other obtained central features (eager, passion, bursting with), and several of the peripheral features (active, spontaneous, exuberant, restless, impatient) concern high arousal elements. These findings are consistent with definitions of enthusiasm in dictionaries and the view of other scholars (Griskevicius et al., 2010; Scherer, 2005).

A third core element in the enthusiasm prototype is goal conduciveness. Our results indicate that both central features of enthusiasm (motivation, eager, curious) and peripheral ones (anticipation, result) imply goal orientation. These findings are consistent with definitions of enthusiasm in dictionaries and scientific views on enthusiasm (Griskevicius et al., 2010; Poggi, 2007).

A fourth core element of the prototype structure of enthusiasm concerns an interpersonal orientation, as our findings indicate that enthusiasm is also defined by a social element. In this sense, our findings concur with the more general notion that emotions serve an important social function, and the advancements that have been made in studies on the interpersonal effects of emotions (e.g., Parkinson, 1996; Van Kleef & Côté, 2022). However, the fact that the literature on emotions acknowledges the interpersonal effects of emotion expressions does not necessarily imply that people consider the social element as a defining characteristic of an emotion. Results of our studies suggest that it may an important defining feature for enthusiasm, as it emerged in central features ('honest', 'kind', and 'bursting with') and its exemplars, as well as in some of the peripheral features ('affecting others', 'together'). This is an important insight, as none of the dictionary definitions and only a few of the scientific approaches have identified the social aspect as a defining characteristic of enthusiasm (Keller et al., 2014).

The four core elements of enthusiasm cover most of the features that our participants generated. Freedom is the only central feature that does not sort nicely within the four above-mentioned core elements (positive valence, high arousal, goal conduciveness and interpersonal orientation). Perhaps a certain degree of freedom is a prerequisite to experiencing enthusiasm rather than a core element itself. In this way, freedom is related to the peripheral features 'spontaneous' and 'unaware', in the sense of being unrestrained.

Our findings are generally consistent with views of other scholars, but we also found some differences. In his interpretation of the circumplex model, Scherer (2005) added goal conduciveness and coping potential (power/control) to the existing dimensions:

valence and arousal. He plotted enthusiasm as being positive and high in arousal, which is consistent with our findings. Additionally, he positioned enthusiasm as being high in power and control and goal conducive. As discussed, goal conduciveness is consistent with our findings. Power could relate to the central feature of energy. We cannot confirm that enthusiasm is strongly associated with a control, however, as it was not directly referenced in the central features.

Measurements used in empirical research on enthusiasm typically cover some of the core elements; positive valence items like pleasure and enjoyment (Frenzel et al., 2009; Kunter et al., 2008), high arousal items like energy and excitement (Kunter et al., 2008, 2011). Goal conduciveness and interpersonal interaction items are sometimes present (Collins, 1978) but are used less often. Some measurements contain items that are related to the core elements, like 'humor' (related to positivity and laughing; Frenzel et al., 2009; Murray, 1983), 'hope' and 'pride' (related to positivity in the sense of optimism; Marcus & MacKuen, 1993), or 'sympathy' and 'empathy' (related to kind; Marcus & MacKuen, 1993; Wheeless et al., 2011). Sometimes measurements contain items that, according to our findings, are less central to the enthusiasm prototype. Wheeless et al. (2011) used items like 'bold' and 'aggressive', which might be related to the peripheral features of 'restless' and 'impatient', but not to core elements or central features.

Limitations and future directions

As in the current studies only Dutch respondents participated, it might be worthwhile to examine the enthusiasm prototype with participants with a different cultural background or a different native language. As emotions may vary across cultures (Mesquita et al., 1997), we encourage studies on the prototype of enthusiasm in other countries, also to obtain insights in generalizability of our current findings. Exploring these variations could reveal whether the features identified in the Dutch sample reflect broader patterns or are shaped by culturally specific factors.

While the present study focuses on the cognitive representation of enthusiasm, it does not directly address the events or processes that generate the emotion. For that purpose, alternative methods have been developed that concentrate on how people's emotions relate to how they evaluate events. Such studies generally concentrate on how people appraise

events on a limited number of dimensions (e.g., novelty, intrinsic pleasantness, goal conduciveness, coping potential, and compatibility with standards; see Scherer, 2019). They focus on how the type of appraisals people make generate the emotion they feel. Such an approach is notably different from the prototype analysis approach, that concentrates on obtaining people's associations without imposing a priori restrictions. We would like to stress that we see merit in both approaches and feel they may be complementary. Whereas prototype analyses reveal what (lay)people consider are the main defining features of an emotion, appraisal studies may indicate which events generate the emotion. Viewed this way, we see added value in further research on how people appraise events that generate enthusiasm.

Future research could also benefit from comparing features of enthusiasm to those of other emotions. In our studies, we concentrated on determining and validating the prototypical structure of enthusiasm. Similar studies could also be designed for emotions that might share some of these features, e.g., awe or joy. Network analyses (Lange & Zickfeld, 2021) could then be employed to identify features that are unique to each of these emotions, and features that are shared by the emotions. We could, for example envisage that freedom (with exemplars free and broad-minded), could also emerge as a central feature in a prototype analysis of awe, while energy (with exemplars strength, power) might be less central to awe. Studies like these could further advance the understanding of the unique properties of enthusiasm (versus other emotions).

In most approaches, enthusiasm is considered a state variable. Other views, however, consider enthusiasm as a personality trait (Seligman, 2002). Results of our current research provided support for both views. Our studies showed that most features in the prototype structure of enthusiasm are generally used to describe states (e.g., good feeling, laughing). Some features, however, are more commonly used as a personality trait (e.g., honest, kind). Additionally, other features can be used to describe both state and trait (e.g., energy, energetic). Further research could focus on the difference between dispositional and situational enthusiasm. Some individuals exhibit higher dispositional enthusiasm than others. On the other hand, certain people, or events, may evoke enthusiasm. Research on dispositional and situational enthusiasm, and the interaction between the two, could provide more insight in the dynamics of enthusiasm. It would be useful to develop an

enthusiasm scale that measures the dispositional tendencies to experience enthusiasm. Additionally, it would be worthwhile to investigate which situations trigger enthusiasm. If certain situations can trigger enthusiasm this would be useful information for educational purposes and other professional situations.

In addition to identifying enthusiasm's core elements, it may be interesting to discuss the motivational basis of enthusiasm. Our findings suggest that enthusiasm likely has a strong agentic orientation, as evidenced by features such as motivation and eagerness. However, other features (e.g., kindness, honesty) hint at connections to communal motives, such as affiliation. Future research could explore whether enthusiasm connects to specific motives, or whether it represents a broader mode of motivational striving.

In summary, the present research substantiates the prototypical structure of enthusiasm, identifying four fundamental elements: positive valence, high arousal, goal conduciveness, and interpersonal orientation. Notably, the latter aspect, interpersonal orientation, is largely absent in dictionary definitions and seldom acknowledged in existing scientific discourse. This not only underscores the benefit of using a bottom-up approach that is provided by prototype analyses. It also contributes to a better understanding of the emotion of enthusiasm. As we also discussed, however, future research could benefit from comparing enthusiasm to other emotions. The features we identified in the current manuscript could serve as input for such comparative studies. We hope that the current research will encourage future studies to further elucidate the unique properties and characteristics of enthusiasm.

APPENDIX A

Features and exemplars in English and Dutch (original)

Features	Exemplars	Features in Dutch	Exemplars in Dutch
Joy	Cheerful, Joy, Upbeat, Good mood	Blij	Vrolijk, Vreugde, Opgewekt, Goed humeur
Motivation	Motivated, Driven, Keen, Going for it	Motivatie	Gemotiveerd, Gedreven, Graag willen, Er voor gaan
Good feeling	Fine feeling, Enjoy, Good atmosphere	Fijn gevoel	Goed gevoel, Genieten, Genot, goede sfeer
Eager	Keen on, Looking forward, Feeling like it	Zin in	Verheugen, Er zin in hebben
Positive	Positivity, Optimism	Positief	Positiviteit, Optimisme
Laughing	Smiling, Jovial, Beaming, Radiant	Lachen	Glimlachen, Goedlachs, Glunderen, Stralen
Passion	Mad about, Love	Passie	Gek zijn op, Liefde
Pleasurable	Nice, Fun	Plezier	Plezierig, Leuk
Honest	Sincere, Authentic, Real, Fair	Eerlijk	Oprecht, Authentiek, Echt, Rechtvaardig
Bursting with	Talking about it, sharing, telling, brimming with	Ergens vol van zijn	Erover praten, delen, vertellen, mededeelzaam
Kind	Friendly, Empathetic, Sociable, Warm	Aardig	Vriendelijk, Empathisch, Sociaal, Warm
Curious	Interested, Eager to learn, Wanting to know everything	Nieuwsgierig	Interesse, Leergierig, Alles willen weten
Freedom	Free, Uninhibited, Broad-minded	Vrijheid	Vrij, Ongeremd, Ruimdenkend
Energy	Energetic, Energy level, Strength, Power	Energie	Energiek, Energieniveau, Kracht, Power
Happiness	Moment of happiness, Contented, Satisfied	Geluk	Gelukkig, Geluksmoment, Happy, Tevreden
Active	Lively, Enterprising, Taking action, Pressing ahead	Actief	Levendig, Ondernemend, Doen, Doorpakken
Spontaneous	Spontaneity, Without thinking	Spontaan	Spontaniteit, Ondoordacht
Anticipation	Hopeful, Dream, Wish, Hope	Verwachting	Verwachtingsvol, Droom, Wens, Hoop
Affecting others	Convincing, Motivating others, Taking along, Winning over	Anderen aansteken	Overtuigen, Anderen aanzetten, Meenemen, Meeslepen
Inspiration	Inspired, Inspiring	Inspiratie	Geïnspireerd, Inspirerend
Presence	Radiating, Charisma	Uitstraling	Uitstralen, Charisma
Together	Collaboration, Cooperation, Team, Connection	Samen	Samenwerking, Team, Connectie
Creative	Ideas, New	Creatief	Ideeën, Nieuw
Exuberant	Exhilarated, Ecstatic, Excited, Fervent	Uitbundig	Uitgelaten, Extase, Opgewonden, Vurig
Result	Winning, Progress, Achievement	Resultaat	Winnen, Voortgang, Prestatie
Restless	Talking loudly, Fidgety, Nervous, Tension	Druk	Hard praten, Bewegelijk, Zenuwachtig, Spanning
Impatient	Unable to wait	Ongeduldig	Niet kunnen wachten
Unaware	Youthful, Naive, Unrestrained, Beginner	Onwetend	Jeugdig, Naïef, Onbevangen, Beginneling

Chapter 3

The Appraisal Patterns and Response Types of Enthusiasm

This chapter is based on:

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Abstract

Enthusiasm is a relatively under-explored emotion. The current research explores the unique characteristics of enthusiasm by examining its cognitive appraisals (Study 1, $N = 300$) and response types (Study 2, $N = 298$) and comparing it with joy and hope. Participants in both studies recalled and rated events where they felt enthusiasm, joy, or hope. Study 1 revealed that enthusiasm occurs in pleasurable, intense situations linked to desired goals. More than joy, it is driven by goal-achievement anticipation. Compared to hope, enthusiasm is associated with more control, less uncertainty, and immediate relevance. Study 2 defines enthusiasm as a positive, energetic state marked by smiling, presence, fulfillment, and thoughts of positive outcomes. Compared to joy, it incites more eagerness, risk willingness, and inclination to join a movement. More than hope, it triggers immediate action without contemplation of negative outcomes. We conclude that enthusiasm is a positive, energetic condition often triggered by pleasurable, intense situations aligning with desired goals. It differs from joy and hope. Enthusiasm drives action when goals are attainable, and risks will likely pay off. Hope emerges when a goal is uncertain and distant. Joy typically follows goal accomplishment and is associated with feelings of connection and a desire to savor the moment.

Nothing great was ever achieved without enthusiasm.
Ralph Waldo Emerson

Introduction

When the renowned American philosopher and poet, Ralph Waldo Emerson, wrote this phrase in 1841, it was unusual to attribute such a high degree of importance to enthusiasm. In current times the landscape has shifted. Today, in advertisements for recruitment, companies often mention that they are looking for enthusiastic employees. In the field of customer experience, customer enthusiasm is considered a key variable (Bolten et al., 2006). Pierce (2021) asserts that emotions such as enthusiasm can aid in understanding what motivates individuals' thoughts and behaviors within the policy process. It helps to better comprehend the motivations, decision-making, and behavior of both policy elites and the general public. In education, teachers' enthusiasm is seen as instrumental for increasing students' intrinsic motivation and vitality (Patrick et al., 2000). There is also evidence for the importance of enthusiasm in contributing to team success (Sandberg, 2007; Walker, 2002). Thus, enthusiasm is not only proposed as a significant motivator of individual behavior, but also as a powerful influence on the motivation of others.

While these insights indicate the importance of enthusiasm in different areas, it should be acknowledged that little is known about the exact profile of enthusiasm and how it can be distinguished from other positive emotions. Studying enthusiasm can provide insights into how positive emotions can be leveraged to understand customer behavior and improve personal and professional outcomes. Additionally, it can enhance educational strategies and workplace productivity. In the current research, we present an empirical approach to gain a better understanding of enthusiasm. For this purpose, we examined the appraisal patterns and response types of enthusiasm. By examining how these differ from joy and hope – two related positive emotions – we aim to establish a specific emotion profile of enthusiasm.

In the current research, we utilize a theoretical framework, known as appraisal theory, (see e.g., Ellsworth & Scherer, 2003; Frijda, 1988; Roseman et al., 2020). A central

tenet of this theory is that emotions are elicited based on a person's appraisal – a subjective evaluation – of the personal significance of a situation, object, or event considering one's motives, interests, and goals (e.g., Roseman & Smith, 2001). Distinct emotions connect to distinct concerns and are tied to people's appraisal of their situation. Numerous empirical studies have supported the notion that emotions can be distinguished by their appraisals (e.g., Frijda et al., 1989; Roseman et al., 1994; Smith & Ellsworth, 1985). People may, for example, feel pride when they have accomplished something they attribute to their own effort (Williams & DeSteno, 2008), but discomfort when they receive something they feel they do not deserve (Van den Bos et al., 2011).

Distinct emotions may also evoke distinct response types. Generally, five different response types are mentioned in literature: feelings, thoughts, action tendencies, actions, and emotivational goals (e.g., Frijda, 1987; Roseman, 1984). These responses align with the specific function of an emotion. Given that different emotions correspond to different goals, motives, and interests, they also entail varying response types. For example, people who experience distress often cry out, while people who are disgusted often turn away from something (Roseman et al., 1994). Studies on response types are not as numerous as appraisal studies, but different scholars have shown that emotions can be distinguished based on their response profiles (e.g., Roseman et al.,1994; Van Dijk & Zeelenberg, 2002, Zeelenberg et al., 1998).

In research on emotions, negative emotions have received more attention than positive ones (e.g., Ellsworth & Smith, 1988b; Roseman et al., 2020). Likewise, studies examining appraisals and response types have predominantly focused on negative emotions, such as fear, anger, sadness, regret, and disappointment (e.g., Frijda et al., 1989; Roseman et al., 1994; Van Dijk & Zeelenberg, 2002; Zeelenberg et al., 1998).

With the emergence of positive psychology, interest in positive emotions has been rising (Fredrickson, 1998; Seligman, 2002). This has, for example, resulted in studies on awe (e.g., Keltner & Haidt, 2003), gratitude (e.g., Bartlett & DeSteno, 2006), hope (e.g., Averill, 1990; Luo et al., 2022), joy (e.g., Johnson, 2020), and pride (e.g., Tracey & Robins, 2007; Williams & DeSteno, 2008). Research has shown that positive emotions are elicited and differentiated by different patterns of appraisals and response types. For example, desire is strongly associated with goal orientation, as it is an emotion people often experience

when they see something they want (Belk et al., 2003). Studies also have shown that positive emotions, such as joy and hope, can be differentiated based on different appraisal patterns (Roseman et al., 2020; Tong, 2015). To illustrate how positive emotions can be differentiated based on appraisals, consider pleasantness as an appraisal dimension. Generally, positive emotions are experienced in pleasant circumstances. Joy typically has a high level of pleasantness (e.g., Watkins, 2020). Still, positive emotions can also be experienced in less favorable situations. One can be hopeful, even when confronted with bad news (Schou et al., 2005). An additional dimension that may be more characteristic of positive emotions, is connectedness. For instance, love is an emotion that is typically high on connectedness (Hazan & Shaver, 1987), while boredom ranks lower on this dimension (Barbalet, 1999).

In the current research, we contribute to this promising and growing literature on positive emotions by examining the specific patterns of appraisals and response types that are associated with enthusiasm. While enthusiasm has been discussed in the philosophical literature (e.g., Verhoeven, 1972), empirical research that examines the specific patterns of appraisals and response types that are associated with enthusiasm, and which differentiates it from other positive emotions is lacking. Our research aims to fill this gap, contributing to the body of knowledge on positive emotions by specifically investigating the appraisals and response types tied to enthusiasm. Empirical evidence from research in customer experience (Bolten et al., 2006), education (Patrick et al., 2000), and team success (Sandberg, 2007; Walker, 2002), underscores the relevance of enthusiasm across various domains. Through research, we can gain valuable insights regarding the origins of enthusiasm, the diverse ways people react to it, and the interplay between individual enthusiasm and broader contextual influences.

Further, we assess how these aspects of enthusiasm diverge from those associated with joy and hope, two positive emotions seem closely related to enthusiasm and that correspond with the motivational and goal-directed aspects we aim to explore with enthusiasm. We chose to compare enthusiasm with joy because joy is often seen as a fundamental emotion from which other positive emotions might derive (e.g., Ellsworth & Smith, 1988a; Fredrickson, 1998; Lazarus, 1991). Joy is typically experienced when a goal is achieved and is closely associated with feelings of connection, celebration, and the

satisfaction of having accomplished something meaningful. Joy often arises in the context of shared experiences with others, such as the celebration of a collective achievement or a personal milestone. It is a reflective emotion, focused on savoring and appreciating the moment of success and the bonds with those involved.

Enthusiasm, on the other hand, is distinguished by its proactive nature and its orientation toward future goals. Unlike joy, which is rooted in the satisfaction of a completed goal, enthusiasm is driven by the anticipation of future success. It energizes individuals to take immediate action, propelling them toward the attainment of goals that are within reach but not yet realized. This forward-looking aspect of enthusiasm evokes a sense of urgency and readiness to engage in activities that will bring them closer to their desired outcomes. By contrasting enthusiasm with joy, we aim to highlight the unique characteristics of enthusiasm as a motivational force.

We contrasted enthusiasm with hope because some scholars have considered enthusiasm to be more or less similar to hope (Marcus & Mackuen, 1993; Pierce, 2021). Pierce even characterizes enthusiasm as belonging to the same category as hope and joy. Hope and enthusiasm are both goal-oriented, but we expect them to arise under different circumstances. Hope can emerge in challenging situations with uncertain outcomes, while we expect enthusiasm to occur when goals appear achievable, prompting direct actions.

Understanding the nuanced differences between these emotions can provide deeper insights into the unique role enthusiasm has in motivational processes. This distinction is essential in understanding how these emotions function differently in motivational processes and how they can be harnessed in various contexts, such as education, work, and personal development.

Although research on enthusiasm is scarce, existing literature and research provide some guidance on the potential characteristics of enthusiasm, its corresponding appraisals and response types. It also provides some direction on potential distinctions between enthusiasm, joy, and hope. According to Griskevicius et al. (2010), enthusiasm is experienced when an important goal is in sight, and therefore goal conduciveness is an important appraisal of enthusiasm. The intense feeling of energy and focus causes the person in question to act and seize the opportunity. Griskevicius refers to this emotion as “anticipatory enthusiasm,” emphasizing its focus on future events. In our paper, we adopt

a broader definition of "enthusiasm," which encompasses not only future-oriented excitement but also the general affective state of heightened interest and engagement, regardless of temporal orientation.

Empirical evidence supports the notion that enthusiasm is inherently goal oriented. In a previous study (Vogelaar et al., 2025a; see Chapter 2 of this dissertation), we used prototype analysis as a method to identify the features that are related to enthusiasm. We found that enthusiasm is a positive emotion, high in energy, associated with goal orientation, and often involves interpersonal contact. Considering all this, we would anticipate enthusiasm to manifest itself through appraisal dimensions such as goal orientation, coping potential, sense of urgency, and connectedness. We would also expect enthusiasm to evoke certain response types, such as eagerness and focus on attaining a goal that is in sight. This would imply a high level of action readiness.

Joy is often regarded as a broad-based emotion. Certain scholars even consider joy the fundamental affect from which all other positive emotions emerge (e.g., Ellsworth & Smith, 1988a; Fredrickson, 1998; Lazarus, 1991). If this conceptualization of joy as an overarching emotion holds true, then enthusiasm might be characterized as a subsidiary category within the construct of joy. However, not all scholars agree with this view. According to Watkins (2020), joy should be considered a distinct emotion experienced when one has a union or connection with someone or something important to them. There is also empirical research that provides insights into the appraisals and response types of joy. In their research on peak experiences, Hoffman et al. (2012) found that joy is most commonly in the presence of loved ones, indicating that joy is often experienced in social situations. In a simultaneous and evolutionary concept analysis of joy, Cottrell (2016) found that the attributes of joy describe a sudden, brief feeling associated with connection, awareness, and freedom. In three qualitative studies, Robbins (2006) found that connectedness was a recurring theme in both childhood and adult experiences of joy. In view of all this, joyous events might be associated with a strong appraisal of connectedness. Tong (2015), in his research comparing the appraisals of 13 positive emotions, found joy scoring relatively high on relevance and goal achievement. Roseman et al. (2020) found that joy is an emotion characterized by certain response types such as jumping up and down, celebrating, and readiness for behavior that would sustain reward. We would therefore

expect a high presence of response types aimed at connecting, savoring an achievement, and holding onto the situation. Although enthusiasm and joy are both experienced in favorable situations, enthusiasm seems more goal-orientated and focused. Enthusiasm seems to be more often present when anticipating a goal, whereas joy is felt when a goal has been reached.

Hope is the second emotion which we contrasted with enthusiasm. Compared to joy and enthusiasm, which are predominantly elicited in pleasant situations, hope tends to emerge in adverse circumstances (Lazarus, 1991). This aligns with Tong's (2015) findings that appraisals associated with hope involve the perception of problems. Therefore, when contrasting hope with enthusiasm, it can be anticipated that hope would be appraised lower in terms of pleasantness. However, both enthusiasm and hope share an aspect of goal orientation. They are evoked in anticipation of a desirable outcome but differ in their perceived goal accessibility. Enthusiasm is typically experienced when the goal appears within reach, whereas hope is evoked when the goal seems unattainable or uncertain. Therefore, when considering response types, we would expect hope to be lower on action readiness. Both enthusiasm and hope are experienced when anticipating a future event, but they are felt in different situations and, as a result, are likely to elicit distinct responses. Hope is typically oriented towards a more uncertain and distant future, while enthusiasm incites immediate action. Luo et al. (2022) found empirical evidence for this future-oriented aspect of hope through prototype analysis, showing that hope combines the belief in a feasible future outcome with the desire for it, even when uncertain. This view aligns with Lazarus's proposition that hope keeps one focused on an unattained goal, even when a positive outcome is unlikely. Given this understanding, it is justified to assert that hope also exhibits goal-oriented inclinations. Empirical evidence supporting this perspective has been provided by Roseman et al. (2020). In examining the response types elicited by hope, he showed that hope is experienced when people focus optimistically on some desired state and anticipate its potential occurrence while concurrently formulating plans. In contrast, enthusiasm is less about making plans but prepares us to act immediately and seize the opportunity. Therefore, compared to hope, we would anticipate enthusiasm to demonstrate response types reflecting feelings, thoughts, and actions congruent with this immediacy.

We conducted two studies aimed at delineating the core characteristics of enthusiasm. Study 1 was dedicated to exploring the cognitive appraisals associated with enthusiasm. In Study 2, we focused on the various response types enthusiasm elicits.

Study 1

In Study 1, we examine the appraisal pattern of enthusiasm. First, we determine which appraisals are most and least characteristic of enthusiasm. Second, we explore how the appraisal pattern of enthusiasm is different from those of joy and hope. We use multiple items to assess nine distinct appraisal dimensions: (1) *Novelty*: The extent to which a situation is appraised as unexpected and new (2 items), (2) *Intensity:* The extent to which a situation is appraised as intense (1 item), (3) *Pleasantness*: The extent to which a situation is appraised as pleasant (2 items), (4) *Goal orientation*: The extent to which a situation is appraised as being important to short-term needs, and long-term goals or desires (10 items), (5) *Coping potential*: The extent to which a situation is appraised as being caused by me or someone else (7 items), (6) *Urgency*: The extent to which a situation is appraised as urgent (2 items), (7) *Certainty*: The extent to which a situation is appraised as uncertain (3 items), (8) *Legitimacy*: The extent to which a situation is appraised as being morally right (1 item), (9) *Connectedness*: The extent to which a situation is appraised as interconnected (2 items). Most appraisals were adapted from previous research. References to earlier studies are provided in Table 2. Some appraisal items (marked with superscripts 10 and 7 in Table 2) are not drawn from prior appraisal research but were developed by the authors to better capture the element of connectedness, which are regarded as particularly important for positive emotions such as joy (e.g. Watkins, 2020) and enthusiasm (Vogelaar et al., 2025a).

Method

Participants and procedure. Participants were 300 British members of the online research panel Prolific[13] (M_{age} = 26.52 years, *SD* = 8.28, 54.7% female, 44.7% male, 0.7% other). Based on the guidelines for sample size (Simmons et al., 2011) we set the sample size to a minimal of 225, with 75 participants per condition. The sample size guarantees a power of .80 with a minimum detectable eta-square of .042, which can be considered a

[13] For more information: www.prolific.co.uk

small effect size. Only participants aged 18 years and above were allowed to participate. Participation was voluntary and anonymous. Participants received £1.25 for completing the study. Participants were randomly assigned via Qualtrics to the conditions; the enthusiasm condition (n = 94), hope condition (n = 114), or joy condition (n = 92). We assumed that the skewness in the response could be attributed to chance. To test this assumption, we conducted a chi-square goodness-of-fit test. Given that the participants were randomly assigned to three conditions (enthusiasm, hope, and joy), we expected an even distribution of 100 participants per condition. The observed distribution was 94, 114, and 92 participants per condition, respectively. The chi-square test result was $\chi^2(2, N = 300) = 2.960$, $p = .228$, indicating that the observed distribution does not significantly differ from the expected distribution. Before beginning, participants gave their informed consent.

Following the procedure used by Smith and Ellsworth (1985), we used an autobiographical task in which we asked participants to recall and describe an event in which, depending upon the condition, they had felt enthusiasm, joy, or hope. This procedure is considered a standard procedure for appraisal research (see for examples, Roseman et al., 1994; Tong, 2015; Van Dijk & Zeelenberg, 2002; Yih et al., 2020; Zeelenberg et al., 1998). It is important to state that it is not essential for appraisal studies using this method that participants (re-)experience the emotion in real-time. Rather, recalling a situation where they felt the emotion allows them to describe the context and their appraisals in retrospect, which is key for determining appraisal patterns. An additional advantage of using a similar method as other research on emotion appraisals is that it may enable the comparison across studies (and emotions).

This is the exact way in which the question was posed:

Please recall a situation where you felt enthusiasm (joy, hope) and describe it as if you are explaining it to someone who had never felt enthusiasm (joy, hope), so that this person would know what it feels like. Please recall as many details of the situation as possible and try to hold this memory in your mind. What exactly happened in this situation to make you feel enthusiasm (joy, hope)? What did it feel like to be feeling enthusiasm (joy, hope)?

Before presenting the appraisal items, we asked participants to indicate the extent to which they felt enthusiasm, joy, or hope in the described situation (1 = *not at all*, 10 = *very much*). Then they were presented with a list of 41 appraisal items that covered eight appraisal dimensions. Cronbach's Alpha for the appraisal items was high (α =.83), indicating good internal consistency. The items were selected from preceding appraisal research (Tong, 2015; Van Dijk & Zeelenberg, 2002), and our earlier research on enthusiasm (Vogelaar et al., 2025a).

Depending upon the condition, participants were asked for each appraisal item to what extent it caused their enthusiasm/joy/hope (1= *not at all*, 10 = *very much*). Then we asked several general questions about the situation (e.g., how long did the event last), and finally asked participants for their gender and age. After the study, participants were informed about the research's objectives.

Results and discussion

Data were analyzed in four steps. First, we performed a check of our experimental manipulation. Then we examined the means of the appraisals in the enthusiasm condition. This was followed by multivariate and univariate analyses to test the differences in appraisals between enthusiasm, joy, and hope. Last, we conducted a multinominal regression analysis to determine the contribution of appraisals in discriminating between enthusiasm, joy, and hope.

Manipulation check. For each dependent measure, we initially conducted a separate one-way ANOVA with emotion condition as the independent variable. Because the assumptions of normality and homogeneity of variances were violated, as indicated by the Shapiro-Wilk test (all $p < .001$) and Levene's test ($p < .001$ for joy and enthusiasm, and p-values ranging from .014 to .044 for hope), we conducted a separate Kruskal-Wallis test with emotion condition as the independent variable. These analyses tested, separately for experienced enthusiasm, experienced hope, and experienced joy, whether that emotion was experienced as most intense in the condition in which that emotion was recalled. Results showed a statistical effect of emotion condition for all experienced emotions: for

experienced enthusiasm ($H(2) = 66.616$, $p < .001$), for experienced joy ($H(2) = 69.467$, $p < .001$), and for experienced hope ($H(2) = 13.271$, $p = .001$)

As illustrated in Table 1, post hoc pairwise comparisons using the Mann-Whitney U test revealed that in the enthusiasm condition, enthusiasm was experienced more intensely than joy and hope. In the joy condition, joy was experienced more intensely than hope, but not more intensively than enthusiasm. In the hope condition, hope was experienced more intensely than joy and enthusiasm. The data suggest that the recalled emotion was generally experienced with the highest intensity, apart from the joy condition where the difference in intensity between joy and enthusiasm was not significant.

Table 1
Intensity of experienced enthusiasm, joy, and hope.

	Experienced enthusiasm		Experienced joy		Experienced hope	
Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*
Enthusiasm	9.28[a]	.90	8.58[b]	1.65	6.87[c]	2.59
Joy	8.91[a]	1.36	9.37[a]	.91	6.78[b]	2.78
Hope	8.19[a]	1.67	8.17[b]	1.76	8.89[c]	1.34

Note. Means within a row that do not share a superscript letter (a, b, c) differ significantly (Mann-Whitney U tests with Bonferroni correction, $p < .0056$). For example, means with different letters (e.g., a versus b) are significantly different from each other.

Profile of enthusiasm based on appraisals. To describe the appraisal pattern associated with enthusiasm, we examined the means of the appraisal items in the enthusiasm condition. We based our profile of enthusiasm on the items that had a mean score of higher than seven or lower than four (see Table 2, for means on all appraisal items). This selection provided insight into which appraisals are most and least characteristic of enthusiasm. Including appraisal items with the lowest scores highlights the characteristics that are notably absent or weakly associated with enthusiasm, further refining our understanding of its unique profile.

This showed that participants appraised their enthusiasm as an intense emotional state that was experienced as pleasant. It was triggered by wanting to obtain something pleasurable and the expectations that were held in the situation. Furthermore, participants appraised the situation as significant in relation to their long-term needs, goals, or desires.

Concurrently, the enthusiasm they felt served to maintain their focus on goal attainment. When experiencing enthusiasm participants felt connected to something that was important to them. Moreover, they felt the urge to openly share their enthusiasm and perceived the situation as a safe environment to show their feelings. They also saw their experience of enthusiasm in accordance with other people's social norms.

The examination also indicated that enthusiasm was not appraised as unpleasant or triggered by wanting to avoid or get rid of something unpleasant. When experiencing enthusiasm, participants did not strongly perceive the situation as being controlled by others or by forces beyond anyone's control. Additionally, they did not experience a heightened need to take action to cope with the consequences of the situation nor did they feel a high degree of uncertainty about the future. The experience of enthusiasm was not associated with other people being online present or with a tendency to hide their feelings in the situation.

These findings suggest that the experience of enthusiasm is characterized as an intense, pleasant emotional state, that exhibits a strong interaction with the social environment. Individuals experiencing enthusiasm feel the urge to openly share their feelings if they consider it safe and socially appropriate. Enthusiasm manifests as a goal-orientated emotion and seems to play a key role in maintaining focus towards these goals. Additionally, it was not tied to a strong sense of external control over the situation, or significant uncertainty about the future.

Table 2

Differences between emotions on appraisals

	enthusiasm (a)		*joy (b)*		*hope (c)*		
	M	*SD*	*M*	*SD*	*M*	*SD*	*ANOVA*
Novelty							
the situation being unexpected[1]	5.28	3.19	5.66	3.20	5.60	3.04	0.41
the situation being new[2]	6.96	2.78	6.04	3.31	5.97	3.04	3.17*
Intensity							
the situation being intense[3]	7.07	2.51	7.35	2.81	7.44	2.59	0.52
Pleasantness							
the situation being pleasant[3]	8.55[c]	1.62	8.98[c]	1.47	5.51[ab]	3.42	63.75**
the situation being unpleasant[3]	1.72[c]	1.45	1.74[c]	1.68	4.62[ab]	3.47	48.51**
Goal orientation							
wanting to obtain something pleasurable[4]	7.51[b]	2.24	6.26[a]	2.96	6.72	3.04	4.87**
wanting to keep something pleasurable[4]	6.35	3.06	5.91	3.24	5.54	3.10	1.75
wanting to avoid something unpleasant[4]	3.69[c]	2.98	3.22[c]	2.97	7.14[ab]	2.81	57.09**
wanting to get rid of something unpleasant[4]	3.19[c]	2.89	3.15[c]	2.84	6.15[ab]	3.32	33.75**
the expectations I had about the situation [5]	7.71[b]	2.51	6.13[ac]	2.95	7.54[b]	2.41	10.43**
the situation being important to my short-term needs, goals or desires[6]	6.98[c]	2.57	6.10	3.17	5.78[a]	2.92	4.60*
the situation being important to my long-term needs, goals or desires[6]	7.67	2.62	6.74	3.27	7.84	2.69	4.18*
problems that needed to be solved before I could get what I wanted[3]	4.35	3.22	3.46[c]	2.91	5.23[b]	3.03	8.58**
the anticipation of achieving an important goal that I aspired to achieve[6]	6.93[b]	2.85	4.52[ac]	3.27	6.26[b]	3.28	14.54**
having achieved an important goal that I aspired to achieve[6]	6.60[bc]	3.13	5.25[a]	3.59	5.01[a]	3.31	6.45**
… did your enthusiasm (joy, hope) help you to stay focused on attaining your goals?[7]	7.64	2.40	7.02	2.40	6.89	2.61	2.59
Coping potential							
the situation being caused by me[6]	5.56[c]	2.91	5.59[c]	3.15	4.12[ab]	3.18	7.82**
the situation being caused by someone else[6]	6.24	3.04	6.14	3.36	5.54	3.44	1.40
the situation being caused by the circumstances[6]	6.28	3.02	6.53	3.06	7.05	2.83	1.87
the situation being mainly due to chance[8]	4.52	3.13	4.40	3.04	5.20	3.09	2.06
feeling in control of what was happening[6]	6.12[c]	2.92	4.92	2.92	3.86[a]	2.88	15.57**
feeling that someone else was in control of what was happening[6]	3.61[c]	2.77	3.44[c]	2.77	4.93[ab]	3.28	7.93**
... forces beyond anyone's control were controlling what was happening[6]	3.27[c]	2.62	4.25	3.19	5.09[a]	3.22	9.29**
Urgency							
feeling I needed to exert myself to deal with the situation[6]	4.72	2.99	4.08	3.18	5.03	2.79	2.65
feeling that action was required to cope with the consequences of the situation[8]	3.34[c]	2.74	2.92[c]	2.40	4.85[ab]	3.30	13.09**
Certainty							
being uncertain what was going to happen[9]	4.69[c]	2.95	4.86[c]	3.31	6.68[ab]	2.69	14.66**
being able to predict what was going to happen next[6]	4.87	2.71	3.85	2.75	4.14	2.78	3.47*
feeling uncertain about the future[9]	3.91[c]	2.73	3.26[c]	2.85	6.11[ab]	2.81	29.88**
Legitimacy							
the situation being morally right[4]	5.07	3.43	5.55	3.43	5.05	3.49	0.64
Connectedness							
feeling connected to someone important to me[10]	5.70[b]	3.47	7.43[ac]	3.24	4.98[b]	3.59	13.24**
feeling connected to something important to me[10]	7.45[c]	2.74	7.61[c]	2.66	6.00[ab]	3.23	9.78**
other people being physically present[7]	5.68	3.67	6.68	3.59	5.48	3.47	3.18*
other people being online present[7]	2.96	2.82	2.64	2.57	3.43	2.97	2.07
my assessment on how others perceived the situation[7]	4.84	3.20	4.05	3.05	4.54	3.03	1.53
the perception that other people were enthusiastic (joyful, hopeful)[7]	6.05	3.14	6.43	3.33	5.75	3.31	1.14
the possibility to affect others with my enthusiasm (joy, hope)[7]	6.39	3.19	6.93[c]	2.96	5.43[b]	3.25	6.11**
To what extent did your feel the urge to share your feelings with someone during or after the situation?[7]	8.48[c]	1.98	7.93	2.42	7.14[a]	2.78	7.94**
To what extent did you consider the situation a safe environment to show you feelings?[7]	7.61[c]	2.28	8.40[c]	2.11	6.18[ab]	2.86	21.52**
To what extent did you try to hide your feelings in the situation?[7]	2.98[c]	2.36	2.61[c]	2.45	4.20[ab]	2.93	10.69**
Would it generally be appropriate to show (joy, hope), in your social environment?[7]	8.06	1.89	7.91	1.93	7.28	2.22	4.41*
To what extent would people consider what you described to be in accordance with social norms …?[7]	8.11	1.81	7.96	2.39	7.77	2.17	0.64

* Significant at the .05 level (2-tailed).

** Significant at the .01 level (2-tailed).

[a] Mean is significantly different to enthusiasm at the .01 level (2-tailed).

[b] Mean is significantly different to joy at the .01 level (2-tailed).

[c] Mean is significantly different to ehope at the .01 level (2-tailed).

[1] Roseman, 2020

[2] Ellsworth & Scherer, 2003

[3] Smith & Ellsworth, 1985

[4] Van Dijk & Zeelenberg, 2002

[5] Griskevicius et al., 2010

[6] Tong, 2015

[7] Vogelaar et al., 2021

[8] Scherer,1993

[9] Lazarus, 1991

[10] Watkins, 2020

Multivariate and univariate differences between appraisals. To study the differences in the appraisals, we examined multivariate and univariate effects. We report both the multivariate and the univariate at the strict significance level of $p < .01$, to correct for multiple testing. To assess multicollinearity, Tolerance and Variance Inflation Factor (VIF) values were computed. Generally, a Tolerance value below 0.10 and a VIF above 10 indicate potential multicollinearity issues (Kutner et al., 2005). In the present analysis, the VIF values ranged from 1.337 to 3.606, with corresponding Tolerance values ranging from 0.277 to 0.748. These values indicate that multicollinearity is not a major concern.

In the present study, multinomial regression analyses were employed to examine the discriminant power of the three emotions, a discussion of which follows subsequently. These analyses also provided multivariate effects related to the various appraisals. Obtaining a significant multivariate effect for an appraisal suggests that the specific appraisal has a differential relation across emotions, accounting for the shared variance among the appraisal items. This indicates that the appraisal has a unique relation with the investigated emotions, even when corrected for the shared similarities among the different appraisal items. We found three appraisals to differentiate on this level between enthusiasm and the other emotions.

Furthermore, the univariate differences among emotions for individual appraisals were assessed. This approach permits us to examine each appraisal in isolation, thus providing insight into its unique impact on differentiating emotions without considering the potential interplay among variables. We used one-way ANOVA analyses with post hoc comparisons (Tukey's HSD) to determine differences between the three emotions for the different appraisals. We found that the emotions differed for 22 of the 41 appraisal items, as detailed in Table 2. We found statistically significant differences ($p < .01$) for six of the nine appraisal dimensions. On the novelty, intensity, and legitimacy dimensions, we did not find differences.

Differences and similarities in appraisals between enthusiasm and joy. There were two appraisals in the multinomial regression that were significantly different between enthusiasm and joy at a multivariate level. This means that these appraisals were the most relevant to differentiate between the emotions when all variables were included. The joy

condition was associated with higher perceptions that circumstances or forces beyond one's control were determining the situation (Exp. $B = 1.37$, $p < .001$), and that it was a safer environment to express feelings (Exp. $B = 1.40$, $p = .009$).

The univariate analyses revealed that enthusiasm differed from joy on 5 of the 41 appraisals, primarily on the goal orientation dimension. Enthusiasm was more often associated with expectations and a desire to attain pleasurable outcomes. The same was the case for the anticipation of achieving or having achieved an important goal. For the connectedness dimension, the results were more nuanced. Although both emotions scored high on connectedness to something important, joy scored significantly higher on feeling connected to someone important.

Differences and similarities in appraisals between enthusiasm and hope. The multivariate analysis indicated that enthusiasm and hope differed only on the appraisal dimension of pleasantness. Specifically, compared to enthusiasm, hope was more frequently associated with a desire to avoid something unpleasant.

The univariate analyses further distinguished enthusiasm from hope on 17 of the 41 appraisal items, which were distributed across all dimensions except novelty, intensity, and legitimacy. In accordance with the multivariate findings, the conditions demonstrated significant differences concerning pleasantness; enthusiasm conditions were more frequently deemed pleasant, while hope conditions were often perceived as unpleasant. Goal orientation was important for both emotions, although it manifested differently. Enthusiasm was more often felt in conditions that were important for short-term needs or where an important goal was achieved. There were no differences regarding expectations or the importance of long-term needs. Although enthusiasm conditions scored higher on short-term needs, hope conditions were assessed higher on urgency, indicating the need for action to handle the condition's consequences. In terms of coping potential, enthusiasm conditions often made respondents feel more in control, while hope conditions led them to feel that someone else or external circumstances were in control. Contrary to our prediction, hope scored higher on urgency. In hope conditions, participants more often indicated that their emotional response was caused by the feeling that action was required to cope with the consequences of the situation. Moreover, hope conditions engendered more uncertainty

about the future compared to enthusiasm conditions. Lastly, for the connectedness dimension, enthusiasm and hope only differed on one appraisal item. Participants more frequently felt a connection to something important in the enthusiasm conditions.

Discriminant power of appraisals. To determine the discriminant power of the emotions, we combined the data of the three conditions and submitted scores on all appraisals to multinomial regression analysis[14]. Multinomial regression is a statistical method used to predict the likelihood of different potential outcomes of a categorical dependent variable, based on a set of independent variables. This technique enabled us to assess the odds of experiencing a specific emotion, like joy, hope, or enthusiasm, based on how one appraises a situation. Essentially, it tests whether different appraisal patterns can accurately predict whether someone would feel joy, hope, or enthusiasm in each situation.

In our analyses, the dependent variable was the specific emotion experienced, while the set of independent variables consisted of the appraisal items. Our findings confirmed that it was indeed possible to predict the specific emotions based on the distinct patterns of appraisals[15]. As shown in Table 3, the results demonstrated a discriminant power of 75.3%[16], with enthusiasm correctly classified in 66.0% of the cases, joy in 74.7%, and hope in 83.3%. The "observed" category in Table 3 tells us what the actual emotion was, and the "predicted" category tells us what emotion the model thought was going to occur based on the appraisal patterns. By comparing the "observed" and "predicted" categories, we can assess the accuracy of the model's predictions. All emotions were classified above the overall chance classification rate (33.3%). In addition, we found a significant model fit $X^2(82, N = 300) = 320.1$, $p < .001$, and a high Nagelkerke R^2 of .740. Therefore, the high

[14] Another type of analysis that is often used for this type of research is discriminant analysis. However, we decided to use multinomial regression analysis because the necessary assumption of a normal distribution for discriminant analysis was not met (Shapiro-Wilk tests: all $p < .001$). Multinomial regression is a robust alternative that does not require the assumption of normality and is well-suited for categorical outcome variables (Bull & Donner, 1987), making it appropriate for our data. Previous studies have successfully employed multinomial regression in similar contexts to handle non-normal data distributions (e.g., Hosmer & Lemeshow, 2000; Long & Freese, 2006).

[15] Our hypothesis that enthusiasm can be differentiated from joy and hope based on differences in cognitive appraisals associated with these emotions was pre-registered in OSF: https://osf.io/etmgq.

[16] We also conducted a multinomial regression analysis using only the appraisals previously employed in appraisal research. The overall percentage of correct classifications in this analysis was 73.9%, indicating that the results are consistent with those obtained from the analysis of all the items.

discriminant power between enthusiasm, joy, and hope suggests that these emotions are associated with distinct appraisal patterns.

Table 3
Classification rate by appraisals of enthusiasm, joy, and hope.

	Predicted			
Observed	Enthusiasm	Joy	Hope	Percent Correct
Enthusiasm	62	19	13	66.0%
Joy	17	68	6	74.7%
Hope	13	6	95	83.3%
Overall Percentage	30.8%	31.1%	38.1%	75.3%

Study 2

In Study 2, we investigate the response pattern of enthusiasm. First, we identify which response types best match and least match enthusiasm. Then, we look at how enthusiasm's response pattern is different from joy and hope. We included multiple items to measure each of the five commonly used response types: feelings, thoughts, action tendencies, actions, and emotivational goals (e.g., Frijda, 1987; Roseman, 1984). Next, we will describe these response types in more detail:

(1) *Feelings*: The extent to which someone feels positive or eager (18 items), (2) *Thoughts*: The extent to which someone thinks about opportunities or about the future (15 items), (3) *Action tendencies*: The extent to which someone feels the tendency to take action or to capture the moment (9 items), (4) *Actions*: The extent to which someone takes action immediately or prepares for something (10 items), (5) *Emotivational goals*: The extent to which someone wants to achieve something or wants to hold on to the situation (18 items).

Some of the response types were adapted from prior research (Roseman et al., 2020), while others were newly developed, drawing on insights from previous studies and established theoretical frameworks. These additional response items were included to create a comprehensive list, aimed at gaining a deeper understanding of responses to enthusiasm. References to the relevant studies and theories are provided in Table 5.

Method

Participants and procedure. Participants were 298 British members of the Prolific online research panel. (M_{age} = 40.74 years, *SD* = 13.64, 50.3% female, 49.7% male). Following the guidelines for sample size provided by Simmons et al. (2011), we determined a minimal sample size of 225, allocating 75 participants to each condition. This sample size ensures a statistical power of .80, with a minimum detectable eta-squared of .042, which is considered a small effect size. Only participants aged 18 years and above were allowed to participate. Participation was voluntary and anonymous. Participants received £1.25 for completing the study. Participants were randomly assigned via Qualtrics to the enthusiasm condition (n = 113), hope condition (n = 90), or joy condition (n = 95). Participants in the different conditions followed the same procedure. Prior to participation, all respondents provided informed consent.

Following the same procedure as in Study 1, we asked the participants to recall and describe an event where they felt enthusiasm (or joy or hope) and describe it as if they were explaining it to someone who had never felt this emotion before so that this person would know what it feels like. Before presenting the response types, we asked the participants to rate the extent to which they felt enthusiasm, joy, or hope in the described situation (1 = *not at all*, 10 = *very much*). Next, they were asked to what extent the presented response types were present in the described situation. The response type items were based on previous research (e.g., Cutcliffe & Barker, 2002; Lazarus, 1991; Luo et al., 2022; Roseman et al., 1994), theories about positive emotions (Fredrickson, 2001; Watkins, 2020), and our previous research on enthusiasm (Vogelaar et al., 2025a). In total, 70 response types were presented (α = .96). Finally, we asked some background questions about their gender and age. Upon completing the study, participants were briefed on the objectives of the research.

Results and discussion

Following a similar approach as in Study 1, we used a four-step analysis. Firstly, an evaluation of the experimental manipulation was conducted. Subsequently, the means of the response types items within the enthusiasm condition were examined. This was followed by multivariate and univariate analyses to assess the variances in appraisals between

enthusiasm, joy, and hope. Lastly, a multinomial regression analysis was employed to ascertain the extent to which appraisals contributed to the discrimination between enthusiasm, joy, and hope.

Manipulation check. Because the assumptions of normality and homogeneity of variances were also violated in Study 2 (Shapiro-Wilk tests: all $p < .001$; Levene's test: all $p < .001$), we followed the same analytical approach as in Study 1 and conducted a separate Kruskal-Wallis test with emotion condition as the independent variable. Results indicated a statistically significant effect for all experienced emotions: For experienced enthusiasm ($H(2) = 41.407$, $p < .001$), for experienced joy ($H(2) = 66.180$, $p < .001$), and for experienced hope ($H(2) = 13.554$, $p = .001$).

As shown in Table 4, a post hoc pairwise comparisons using the Mann-Whitney U test revealed that in the enthusiasm condition, respondents experienced enthusiasm not significantly more intensely than joy, but enthusiasm was experienced more intensely than hope. In the joy condition, joy was experienced more intensely than enthusiasm and hope. Finally, in the hope condition, hope was experienced more intensely than joy, and enthusiasm. This suggests that the recalled emotion was felt most strongly in the respective condition, except for enthusiasm and joy in the enthusiasm condition.

Table 4
Intensity of experienced enthusiasm, joy, and hope.

	Experienced enthusiasm		Experienced joy		Experienced hope	
Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*
Enthusiasm	9.15^{a}	.94	9.11^{a}	1.14	7.42^{b}	2.49
Joy	8.65^{a}	1.48	9.52^{b}	.97	7.06^{c}	2.74
Hope	8.09^{a}	1.85	8.28^{b}	1.84	9.02^{c}	1.13

Note. Means within a row that do not share a superscript letter (a, b, c) differ significantly (Mann-Whitney U tests with Bonferroni correction, $p < .0056$).

Profile of enthusiasm based on response types. We created a profile of enthusiasm based on the highest and lowest-scoring response types. We selected response type items that exceeded a score of eight and fell beneath a score of four, see Table 5. As in Study 1, the aim was to create a profile of enthusiasm based on the highest and

lowest-scoring response types, rather than to obtain absolute scores. This time we used a more stringent selection criterion than in Study 1. If we had used the same criterion as in Study 1, which was 7, it would have yielded an excessive number of items (34) due to the generally higher scores observed for response-type items. This would not have been very selective.

Notably, enthusiasm exhibited distinct prominence related to certain feelings. When participants experienced enthusiasm, they felt fulfilled and present in the moment. Additionally, they felt open to the experience, energized, eager, inspired, and positive. Furthermore, participants experiencing enthusiasm often smiled and thought about possible good outcomes. They also ranked high on wanting to obtain something positive. Conversely, participants experiencing enthusiasm typically did not report feeling uncertain. They did not tend to think about nothing nor about potential negative outcomes. They also did not feel a tendency to pray. These results indicate that enthusiasm is typified by positivity and openness, high energy, and eagerness. Enthusiasm can further be described by an optimistic goal orientation, devoid of uncertainty or negative thoughts.

Table 5

Differences between emotions on response types

	Enthusiasm (a)		*Joy (b)*		*Hope (c)*		ANOVA
Feelings	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Feel strong?[1]	7.35	1.95	7.60[c]	2.18	6.57[b]	2.17	6.17**
Feel present in the moment?[1]	8.35[c]	1.65	9.12[c]	1.60	7.48[ab]	2.32	17.84**
Feel successful?[1]	7.79[c]	2.07	8.09[c]	2.16	6.36[ab]	2.61	15.51**
Feel anticipation about what was coming?[1]	7.76	2.34	7.24	2.70	7.80	2.32	1.55
Feel fulfilled?[1]	8.34[c]	1.65	9.08[c]	1.29	6.61[ab]	2.46	43.84**
Feel relaxed?[1]	6.25[c]	2.23	7.23[c]	2.51	5.07[ab]	2.71	17.76**
Feel a sense of lightness in your movements?[2]	6.65[b]	2.64	7.87[ab]	2.53	5.90[b]	2.93	12.71**
Feel connected?[3]	7.78[bc]	1.95	8.93[ac]	1.60	6.83[ab]	2.46	24.90**
Feel as if everything was more vivid?[2]	7.29	2.32	8.08[c]	2.05	6.34[b]	2.71	12.52**
Feel open to the experience?[4]	8.61[c]	1.54	8.98[c]	1.52	7.60[ab]	2.21	15.18**
Feel that action was required?[5]	6.98[b]	2.51	4.78[ac]	2.92	6.76[b]	2.67	19.89**
Feel uncertain?[6]	3.30[c]	2.36	2.94[c]	2.34	5.79[ab]	2.90	35.10**
Feel challenged in a positive way?[1]	7.63[b]	2.20	6.45[a]	3.02	6.76	2.61	5.77**
Feel impatient?[1]	4.99[b]	2.89	3.26[ac]	2.73	5.93[b]	3.02	20.64**
Feel energised?[1]	8.78[c]	1.19	8.82[c]	1.54	7.00[ab]	2.27	35.62**
Feel eager?[1]	8.62[bc]	1.40	7.73[a]	2.04	7.41[a]	2.40	10.69**
Feel inspired?[1]	8.26[c]	1.73	8.05	2.21	7.32[a]	2.37	5.30**
Feel positive?[1]	9.03[c]	1.09	9.43[c]	1.29	8.04[ab]	2.09	20.40**
Thoughts							
Think that you could do anything you wanted to?[2]	6.46	2.55	6.79	2.61	5.98	2.74	2.22
Think that you got something that you wanted?[2]	7.87	2.08	8.17	2.47	7.14	2.61	4.53*
Think about nothing?[1]	3.12	2.40	3.65	2.71	3.02	2.27	1.79
Think about whatever came to mind?[1]	6.07	2.36	5.54	2.69	5.60	2.41	1.45
Think about the present?[1]	7.55	1.98	8.36[c]	2.12	7.21[b]	2.31	7.20**
Think about possible good outcomes?[1]	8.35	1.68	7.76	2.45	8.50	1.76	3.70*
Think about possible bad outcomes?[7]	3.55[c]	2.34	3.31[c]	2.79	6.28[ab]	2.90	35.98**
Think about long-term goals?[6]	6.67[c]	2.92	6.17[c]	3.26	7.91[ab]	2.40	8.88**
Think about the future?[2]	7.59[c]	2.21	7.34[c]	3.06	8.84[ab]	1.54	10.92**
Think about the chances of attaining a goal?[7]	7.12[b]	2.70	5.96[ac]	3.01	7.67[b]	2.62	9.23**
Think about opportunities?[1]	7.09[b]	2.60	5.96[ac]	2.86	7.40[b]	2.52	7.71**
Think about an upcoming event?[1]	6.35	3.03	5.35	3.26	6.47	2.85	3.88*
Think about a reward?[8]	6.13[b]	3.21	4.64[ac]	3.18	6.14[b]	3.01	7.33**
Think an important goal was within reach?[1]	6.97	2.74	6.18[c]	3.20	7.67[b]	2.48	6.45**
Think about the next steps?[1]	7.06	2.60	6.38[c]	2.96	7.88[b]	2.29	5.50**

Action tendencies							
Feel the tendency to jump up and down?[2]	4.80[b]	3.13	6.43[ac]	3.20	4.42[b]	3.04	11.08**
Feel the tendency to pray?[9]	2.70	2.75	2.57	2.59	3.66	3.21	4.06*
Feel the tendency to take it all in?[2]	7.24[b]	2.40	8.42[ac]	1.96	6.64[b]	2.52	14.37**
Feel the tendency to plan for the future?[2]	6.32	2.71	6.17	3.32	7.23	2.57	3.73*
Feel the tendency to take action?[5]	7.29[b]	2.50	5.57[a]	2.98	6.52	2.55	10.71**
Feel the tendency to take a risk?[1]	5.40[b]	2.87	3.91[a]	2.73	4.77	2.92	7.14**
Feel the tendency to capture the moment?[1]	6.98[bc]	2.66	8.19[ac]	2.27	5.86[ab]	3.07	17.58**
Feel the tendency to talk about the experience?[1]	7.39	2.46	8.14[c]	2.48	7.01[b]	2.52	4.94**
Feel the tendency to involve others?[1]	6.56	2.82	7.07	2.89	6.40	2.64	1.51
Actions							
Celebrate?[2]	7.21[b]	2.81	8.48[ac]	2.07	6.30[b]	3.06	15.54**
Smile?[2]	8.50[bc]	1.94	9.52[ac]	1.10	7.56[ab]	2.45	24.60**
Take time to relax?[1]	5.41	2.60	6.34	2.77	5.57	2.53	3.53*
Act to attain your long-term goals?[5]	6.62[b]	2.83	5.17[ac]	3.10	6.81[b]	2.68	9.34**
Keep going, despite setbacks?[10]	7.11	2.48	6.25	3.22	7.30	2.27	4.11*
Move towards someone or something?[3]	6.73	2.66	7.24	2.90	6.60	2.89	1.40
Talk about opportunities?[1]	6.31	2.88	5.98	3.20	6.59	2.74	0.99
Take action immediately?[8]	6.89[bc]	2.53	5.14[a]	3.02	5.47[a]	2.68	12.26**
Prepare for something?[1]	6.85[b]	2.72	5.61[a]	3.27	6.84	2.72	5.86**
Share your feelings?[1]	7.06[b]	2.48	8.16[ac]	2.06	6.92[b]	2.56	7.74**
Emotivational goals							
Want to make someone proud?[1]	6.62	3.21	6.85	3.25	6.61	3.13	0.18
Want to attain a specific goal?[1]	7.67[b]	2.48	5.91[ac]	3.28	7.83[b]	2.55	14.26**
Want to experience something new?[1]	7.20	2.73	6.71	3.06	6.27	2.89	2.67
Want to learn something?[1]	6.71	2.87	5.81	3.20	6.13	2.91	2.42
Want to achieve something?[1]	7.92	2.48	6.86	2.98	7.83	2.54	4.76**
Want to improve yourself?[1]	6.94	6.94	6.69	6.69	7.16	2.86	0.55
Want to connect to someone or something?[3]	6.57[b]	2.84	8.56[ac]	2.06	6.88[b]	2.66	17.37**
Want to get more of something?[2]	6.73	6.73	7.12	7.12	6.71	2.86	0.64
Want to hold on to the situation?[1]	7.14[b]	2.76	9.09[ac]	1.63	6.36[b]	3.06	28.71**
Want to make the experience last longer?[2]	7.16[bc]	2.86	8.77[ac]	2.02	5.94[ab]	3.14	25.24**
Want to be part of a group or movement?[1]	5.81	3.11	4.67	3.19	4.74	3.10	4.32*
Want to be close to someone?[2]	5.99[b]	3.17	8.32[ac]	2.58	6.93[b]	2.76	17.00**
Want to improve your situation?[9]	6.82[c]	2.70	5.85[c]	3.13	8.14[ab]	2.52	15.66**
Want to keep faith?[9]	5.11	3.27	5.03	3.65	6.42	3.16	5.07**
Want to have a positive result in the long run?[1]	7.98[c]	2.27	8.14	2.45	9.07[a]	1.59	7.09**
Want to avoid something negative?[7]	6.70	3.09	6.80	3.38	7.79	2.76	3.60*
Want to obtain something positive?[1]	8.35	1.82	7.57[c]	2.61	8.83[b]	1.96	8.27**
Want to be lucky?[1]	6.37	3.13	6.60	3.09	7.19	2.95	1.84

* Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

[a] Mean is significantly different to enthusiasm at the .01 level (2-tailed).

[b] Mean is significantly different to joy at the .01 level (2-tailed).

[c] Mean is significantly different to ehope at the .01 level (2-tailed).

[1] Vogelaar et al., 2021

[2] Roseman, 2020

[3] Watkins, 2020

[4] Fredrickson, 2001

[5] Averill, 1990

[6] Gasper et al., 2020

[7] Lazarus, 1991

[8] Griskevicius et al., 2010

[9] Luo et al., 2022

[10] Cutcliffe & Barker, 2002

Multivariate and univariate differences between response types. In this section, we describe the multivariate and univariate differences in response types. Adhering to the same selection criteria from Study 1, both multivariate and univariate differences were examined at a significance level of $p < .01$. A multicollinearity diagnostic was performed using VIF and Tolerance values as outlined in Study 1. In this analysis, VIF values ranged

from 1.522 to 5.663, with Tolerance values ranging from 0.177 to 0.657. Although some VIF values approached 5, they remained below the threshold of 10, and all Tolerance values were above 0.10, indicating that multicollinearity is not a major concern.

In accordance with the analysis for the appraisal items, we investigated the multivariate effects of the response type items to discern if certain response types had a unique association when accounting for shared variance amongst these items. We found significant multivariate relations for 16 response types.

Furthermore, we examined the univariate differences between emotions for these response types through ANOVA analyses, which showed the emotions differing in 48 out of 70 response types, shown in Table 5. For these differences, we utilized post hoc comparisons using Tukey's HSD tests to specifically distinguish between enthusiasm versus joy and enthusiasm versus hope.

Differences and similarities in response types between enthusiasm and joy. The multivariate analysis showed that enthusiasm and joy differed on seven response type items. Compared to participants experiencing joy, participants experiencing enthusiasm were more eager (Exp. $B = .513$, $p < .001$), more prepared to take a risk (Exp. $B = .603$, $p < .001$), more inclined to be part of a movement (Exp. $B = .764$, $p = .002$), and more often wanted to obtain something positive (Exp. $B = .391$, $p < .001$). In the joy condition, participants more often felt the tendency to jump up and down (Exp. $B = 1.455$, $p < .001$), and more often wanted to hold on to the situation (Exp. $B = 2.357$, $p < .001$), and to connect to someone or something (Exp. $B = 1.618$, $p < .001$).

On a univariate level, enthusiasm differed from joy on all five assessed response types and on 25 of the 70 response type items. Participants in enthusiasm conditions felt more challenged, impatient, and eager, and demonstrated an increased tendency to take action and risk. They also exhibited more thoughts about rewards, opportunities, and goal attainment. Their actions were more often aimed at attaining long-term goals and the chances of attaining a goal. Furthermore, they more often prepared for something or took action immediately.

Participants in the joy condition reported more feelings of connection and lightness in their movement, a tendency to jump, savor the moment, and capture

experiences. Their actions more often involved celebrating, smiling, and sharing feelings, and they more often desired to be close to someone and to connect to someone or something. Participants in the joy condition more often wanted to hold on to the situation and wanted to make the experience last longer.

Differences and similarities in response types between enthusiasm and hope. The multivariate analysis indicated that enthusiasm and joy differed on nine response type items. Participants in the enthusiasm condition reported feeling more fulfilled (Exp. $B = .615$, $p = .009$), energized (Exp. $B = .417$, $p < .001$), eager (Exp. $B = .578$, $p = .003$), and successful (Exp. $B = .645$, $p = .009$) than participants in the hope condition. They were also more likely to act immediately (Exp. $B = .601$, $p < .001$). Conversely, participants in the hope condition were more likely to ponder potential negative outcomes (Exp. $B = 1.510$, $p < .001$), take time to relax (Exp. $B = .1.336$, $p = .007$), and more often wanted to keep faith (Exp. $B = 1.401$, $p = .001$).

In the hope condition, 'feeling strong' came out of the analysis significantly higher than in the enthusiasm condition (Exp. $B = 1.884$, $p < .001$), but we believe that this was the result of a suppressor effect. A suppressor effect can reduce or enhance the correlation between two variables due to the inclusion of an additional variable that acts as a suppressor. We suspect this is the case because on average participants indicated feeling less strong in the hope condition ($M = 6.57$, $SD = 2.17$), than in the enthusiasm condition, ($M = 7.35$, $SD = 1.83$), $p = .022$.

The univariate analysis revealed differences across all five response types between enthusiasm and hope, affecting 20 out of the 70 response type items. The differences were especially observed within the feelings dimension, with 11 out of 18 feeling items diverging between the two emotions. Participants in the enthusiasm condition generally reported a heightened sense of presence, success, fulfillment, relaxation, connectivity, and openness as compared to those in the hope condition, along with an increased frequency of feelings such as energy, eagerness, inspiration, and positivity. Conversely, participants in the hope condition often reported feelings of uncertainty. No thought responses were notably more prevalent in enthusiasm conditions. However, participants in hope conditions frequently reflected on potential negative outcomes, the future, and long-term goals. The only variation

in action tendencies was a greater inclination to seize the moment in enthusiasm conditions. Regarding action execution, participants experiencing enthusiasm more often engaged in immediate action and smiling. Furthermore, the enthusiasm condition was more frequently associated with a desire to prolong the experience, while the hope conditions tended to inspire a desire for improved circumstances and long-term positive outcomes.

Discriminant power of response types. Using the same approach as in Study 1, we employed multinomial regression analysis to determine the discriminant power of enthusiasm versus joy and hope. In this instance, multinomial regression was used to ascertain whether the patterns of response types could predict the three emotions. The number of response types was too high to incorporate all of them in a regular multinomial regression analysis. Consequently, we employed a forward stepwise multinomial regression analysis to address this issue. While in a regular multinomial regression, all independent variables are included in the analysis simultaneously, in a forward stepwise multinomial regression, variables are selected for inclusion in a step-by-step manner based on their statistical significance, resulting in a more manageable model. Our findings confirmed that it was indeed possible to predict the three emotions using the response type patterns.

As illustrated in Table 6, the discriminant power of the model was high 79.2% (enthusiasm 78.8%, joy 81.1%, hope 77.8%) with a significant model fit $X^2(42, N = 298) = 374.58$, $p < .001$, and a Nagelkerke R^2 of .806. This indicated that enthusiasm, joy, and hope have different response type patterns.

Table 6
Classification rate by response types of enthusiasm, joy, and hope.

	Predicted			
Observed	Enthusiasm	Joy	Hope	Percent correct
Enthusiasm	89	9	15	78.8%
Joy	13	77	5	81.1%
Hope	12	8	70	77.8%
Overall Percentage	38.3%	31.5%	30.2%	79.2%

Discussion

In the present research, we examined the appraisal patterns (Study 1) and the response types (Study 2) associated with enthusiasm. By identifying its distinctive appraisal patterns and response types, and comparing these to joy and hope, we aim to describe the unique features of enthusiasm. Insights in the specific features of emotions can enhance theoretical models and their applications, supporting more targeted and effective psychological research. By distinguishing enthusiasm from joy and hope, we gain a better understanding of their unique behavioral and motivational impacts. Different specific emotions have distinct appraisal patterns and response types, which provide valuable insights into their situational triggers and manifestations.

Studying enthusiasm is important because enthusiasm drives action, making it key for understanding motivational processes. Research underscores its significance in customer behavior, education, and team success, demonstrating its relevance across various domains. By studying enthusiasm, we gain insights into leveraging positive emotions to impact customer behavior, educational strategies, workplace productivity, and overall personal and professional outcomes. By contrasting enthusiasm with joy and hope, we aim to highlight the proactive nature of enthusiasm and to delineate its specific motivational and goal-directed features. In this discussion, we will further elaborate on the specific profile of enthusiasm.

A profile of enthusiasm based on its appraisals and response types

Upon examining its typical and atypical appraisals and response types, enthusiasm can be characterized as a pleasant, high-intensity emotion that is strongly associated with goal orientation and social interaction. It relates to a sense of connection to something relevant. If situations are perceived as safe and the response is considered appropriate within a social context, individuals experiencing enthusiasm feel a strong urge to share their feelings. They exhibit a reduced level of uncertainty about the future, combined with a strong sense of personal empowerment. Typical for enthusiasm are feelings of positivity, energy, and eagerness. Frequent smiling and a strong sense of presence are also common, along with feelings of fulfillment and openness, prompting thoughts about favorable

outcomes and aspirations for attaining something positive. Conversely, enthusiasm is not typically linked to extensive contemplation of potential negative outcomes.

Enthusiasm appears to motivate the pursuit of desirable outcomes, aligning with Griskevicius et al. (2010), as well as Shiota et al. (2014), who emphasize the centrality of goal conduciveness to the experience of enthusiasm. It is marked by positive energy, a sense of control, and eagerness to act, free from uncertainty or negative thoughts, and a willingness to share feelings in a safe environment.

Differences between enthusiasm and joy

Although enthusiasm and joy are closely related, our study identified several differences between enthusiasm and joy. In terms of appraisal patterns, enthusiasm was more associated with eagerness, impatience, challenge, risk-taking, and a tendency to join movements. Additionally, enthusiasm was frequently linked to goal-driven perspectives, thinking about opportunities and potential rewards, tied to expectations of achieving desired outcomes and an inclination for immediate action. In contrast, joy was more influenced by external circumstances and comfort in expressing feelings, characterized by a sense of lightness and a tendency to jump up and down and take it all in. While both emotions conveyed a profound sense of connection to something meaningful, joy demonstrated a more pronounced connection with significant individuals.

The response types aligned with this. Enthusiasm showed greater eagerness, risk-taking, and motivation to obtain positive outcomes, often driven by an urge for immediate action. Thoughts accompanying enthusiasm were primarily focused on rewards, opportunities, and goal attainment, with their actions consistently aimed at achieving long-term goals and increasing the chances of goal attainment. Conversely, joy is not an emotion tied to seeking change, rather, it involves a desire to maintain the current situation. It often coincides with a feeling of connection and a longing to sustain this feeling. These findings support Watkins' (2020) idea that joy is an emotion felt when people connect to someone or something and align with the conceptualization proposed by Roseman et al. (2020), in which joy promotes behaviors aimed at maintaining reward.

To summarize, enthusiasm often manifests with confidence in the ability to improve the current situation, accompanied by a readiness to take action, join movements,

and assume the associated risks. On the other hand, joy is characterized by being in the moment, nurturing connections, and taking it all in, without seeking change.

Differences between enthusiasm and hope

Our study also revealed differences between enthusiasm and hope. Enthusiasm conditions were generally perceived as pleasant, contrasting to the frequently unpleasant perceptions associated with conditions involving hope. This finding supports prior theoretical perspectives of hope. As Lazarus (1991) and Tong (2015) highlight, hope is often felt in adverse circumstances. Enthusiasm was linked to increased fulfillment, energy, eagerness, and success. It was also related to a heightened sense of connection to something of importance. While goal orientation was important for both emotions, enthusiasm was more related to short-term needs, when an important goal was in sight or accomplished, along with a tendency for immediate action and an increased sense of personal control. In contrast, hope often involved a perception of control being influenced by external circumstances or other individuals with an increased degree of uncertainty about the future. This aligns with Tong's (2015) empirical findings, which highlighted that hope often entails a lower sense of personal control and a greater perception that external circumstances steer the course of events. Hope was more often linked to thinking of potentially negative outcomes, taking time to relax, and maintaining faith. Hope was further linked to a higher sense of urgency, a feeling that action was required to cope with the consequences of the situation. This observation might be influenced by the way the specific item was stated, specifically the term "required to cope", which presumes the necessity to deal with negative outcomes.

Regarding response types, enthusiasm was typically linked to an enhanced sense of positivity, eagerness, and connectedness, along with increased feelings of success and fulfillment. Conversely, hope was associated with feelings of uncertainty and a propensity to consider potential negative outcomes. People experiencing enthusiasm focused more on seizing the present moment and extending the experience, whereas hope predominantly related to a desire for better future outcomes. This characteristic reflects the finding by Roseman et al. (2020) that hope is experienced when individuals optimistically focus on a desired future state. It is also congruent with Luo et al.'s (2022) prototype analysis

indicating that hope combines a belief in the possibility of a future outcome with a desire for that outcome.

In essence, enthusiasm is about being excited in the present moment and taking action to seize opportunities, while hope is about looking toward the future with optimism and perseverance despite misfortune or setbacks.

Strengths, limitations, and future directions

Our research contributes to the understanding of enthusiasm by identifying its appraisals and response type profile, and by clarifying the difference with joy and hope. A deeper insight into the commonalities and distinctions of these closely related emotions grants us a more precise grasp of enthusiasm's unique characteristics. A better understanding of this positive emotion can help individuals better cultivate and sustain it, leading to increased motivation and achievement. By narrowing the scope of our analyses to these three emotions, we were able to establish a foundational understanding of the intricate relationships between these emotions. Positive emotions like contentment, interest, or inspiration, while also relevant, align less with the motivational and goal-directed aspects we aim to explore with enthusiasm. Our research strategy for the current study was to provide an in-depth examination of enthusiasm by focusing on identifying its central and peripheral appraisals and response types. Therefore, we chose to include a comprehensive list of appraisals and response types to compare enthusiasm specifically with joy and hope, as these emotions are more closely aligned with the goal-directed nature of enthusiasm. Future studies could examine how enthusiasm uniquely differs from these or other positive emotions. A comparative study with a broader spectrum of emotions would provide a more comprehensive understanding of where enthusiasm stands in the vast emotional landscape. This would provide an even richer understanding of enthusiasm, potentially benefiting both theoretical frameworks and practical applications in fields like psychology, education, and organizational behavior.

The specific appraisals and response types selected for this study largely drew from existing research in the field. Historically, this body of research has predominantly focused on negative emotions. To address this gap, we incorporated new sets of appraisals and response types derived from our previous research. Future research could build upon

this. For example, when investigating a broader spectrum of appraisals and response types. Empirical examinations of these sets across diverse positive emotions would be especially insightful. Employing such comprehensive sets in future investigations will undoubtedly deepen our comprehension of positive emotions, including enthusiasm.

One of the strengths of our study is the use of a well-established recall method for emotions that is commonly used in appraisal research (e.g. Roseman et al., 1994; Smith & Ellsworth, 1985, Tong, 2015; Van Dijk & Zeelenberg, 2002; Yih et al., 2020; Zeelenberg et al., 1998), ensuring consistency and comparability with previous studies on appraisals and response types of emotions. Although self-report measures in general can introduce potential biases related to memory recall and social desirability, the autobiographical recall method we used is considered appropriate for assessing appraisals because it asks participants to keep a specific real-life emotional experience in mind that they associate with the specific emotion at hand. It is also important to emphasize that our goal was not to induce real-time emotions. Instead, asking participants to recall and describe past emotional experiences allowed us to capture detailed contextual information and retrospective appraisals and response types. This is corroborated by Mills and D'Mello (2014), who demonstrated that the Autobiographical Emotional Memory Task (AEMT) effectively induces specific emotions by having participants recall and write about intense emotional experiences. However, they also found that this method could inadvertently induce other incidental emotions. In our study, we also observed this. For example, in the enthusiasm condition, high levels of joy (but less hope) were also reported in addition to intense enthusiasm. This might imply that differences in appraisals and response types between joy and enthusiasm are, in fact, larger than those we found.

Although the recall method used in our studies is well-established, we acknowledge the ecological limitations of self-reported online questionnaires. To broaden the methodological scope, future research could focus on studies conducted in more realistic environments and/or manipulate appraisals and examine whether this influences the experience and appraisals of enthusiasm. For example, a study could induce an appraisal of goal-achievement anticipation and test whether this elicits more intense enthusiasm relative to joy. This would further validate our finding that enthusiasm, more than joy, is driven by goal-achievement anticipation.

Finally, we acknowledge that our sample was confined to UK participants, suggesting that the findings may predominantly represent the Western perspective on emotions. Emotions are notably shaped by cultural contexts and associated display rules inherent within these settings (Matsumoto, 2007). Future research might benefit from expanding the sample to encompass a broader array of cultural backgrounds, drawing inspiration from studies like that of Tong (2015) which integrated a cross-cultural viewpoint.

Conclusion

Enthusiasm, as demonstrated in the current research, emerges as a unique emotion, characterized by pleasant intensity, goal orientation, active social engagement, and a profound sense of self-empowerment. Enthusiasm often emerges when individuals perceive a goal as attainable and believe that immediate action may significantly enhance the likelihood of successful outcomes. Enthusiasm is marked by a distinct sense of eagerness and readiness for risk-taking, suggesting a proactive approach toward seizing opportunities.

Our findings further revealed that enthusiasm, joy, and hope are different emotions. They likely have different functions and tend to occur in different situations and time frames. Whereas hope is commonly experienced in situations with distant, uncertain goals where maintaining a positive outlook is key, joy tends to arise upon the successful achievement of a goal. Enthusiasm, however, stands out with its goal-directed energy and readiness for action. It propels individuals into an engaged, empowered state, enabling them to actively interact with their surroundings and work towards their goals.

Chapter 4

The Appropriateness and Experience of Enthusiasm

This chapter is based on:

Vogelaar, R., Van Dijk, E., Prasastyoga, B., & Van Dijk, W. W. (2025). The appropriateness and experience of enthusiasm across contexts and culture. *Manuscript submitted for publication***.**

Abstract

Enthusiasm is a high-arousal, goal-directed emotion marked by energetic engagement and social expressiveness. Expressing enthusiasm may, however, not always be considered appropriate. This study investigated how the perceived appropriateness of expressing enthusiasm relates to the experience of enthusiasm across private, work, and public contexts in 51 societies[17]. Using data from a large-scale omnibus survey (N = 12,851), we examined whether perceived appropriateness is consistently associated with experienced enthusiasm and whether this relationship differs by context. Results showed that perceived appropriateness was positively associated with experienced enthusiasm in all three studied contexts, with the strongest link found in public settings and the weakest in private settings. Interestingly, perceived appropriateness ratings were highest in work contexts, whereas enthusiasm was experienced most strongly in private contexts. Further analyses indicated that perceived appropriateness partially accounted for context-related differences in enthusiasm, although this indirect pathway was not observed in all context comparisons. Cross-cultural analyses further suggested that cultural values might shape these dynamics in distinct ways. Society levels of individualism-collectivism and power distance were unrelated to perceived appropriateness ratings but significantly associated with experienced enthusiasm. Specifically, societies with higher levels of individualism were linked to lower enthusiasm in private and work contexts, while societies with larger power distance were associated with greater enthusiasm across all three contexts. Overall, these findings indicate that the experience of enthusiasm is shaped in part by social norms, situational context, and broader cultural values.

[17] The term "societies" rather than "countries or nations" is used to acknowledge that the dataset includes both countries and regions, such as Hong Kong, that do not constitute independent nation-states.

Introduction

People are social and emotional beings. Although emotions are personal experiences, they are also shaped by the social contexts in which they occur (Boiger & Mesquita, 2012; Parkinson et al., 2005). In the current study, we focus on enthusiasm, a positive emotion that recent research has identified as a goal-directed emotion marked by energetic engagement and social expressiveness (Vogelaar et al., 2025a). Individuals experiencing enthusiasm often feel a strong urge to share and express their feelings (Vogelaar et al., 2025b). This may enable individuals to engage actively with their social environment and pursue meaningful goals. However, they may primarily do so when the social environment is receptive to expressing these feelings. Individuals who consider expressing enthusiasm must be attuned to the extent to which their emotional display is appreciated or deemed appropriate by others.

While people generally seek to enhance positive emotions, research shows that they may also regulate these emotions downward to align with prevailing social norms (English et al., 2017). For instance, feelings of triumph may be rewarding, yet individuals often downplay them in the presence of others to avoid appearing boastful (Friedman & Miller-Herringer, 1991). Experimental evidence suggests that suppressing emotional expression can alter the subjective experience of emotion. Gross and Levenson (1997) found that suppressing positive emotions diminishes the emotional experience itself. A systematic review and meta-analysis further confirmed this pattern, showing that expressive suppression is associated with reduced positive affect, particularly when individuals inhibit the expression of positive emotions (Fernandes & Tone, 2021).

With social sharing being an essential feature of enthusiasm (Vogelaar et al., 2025a), this raises the question how perceived appropriateness of expressing enthusiasm relates to the experience of enthusiasm. One important way in which emotion regulation is socially guided is through socially shared norms that define the appropriateness of emotional expression across cultural and situational contexts (Ekman &Friesen, 1969). These norms guide how individuals manage their emotional displays so that they align with cultural expectations and social dynamics. While emotion regulation can be intentionally and internally motivated, regulation guided by social norms reflects external expectations

that shape emotional expressions in interpersonal settings. Socially shared norms help individuals adjust their emotions to meet the demands of the social environment, whether by amplifying, downplaying, or suppressing them. Importantly, they apply not only to negative emotions but also to positive emotions, which are often expressed selectively depending on context and audience (Matsumoto, 1990; Tran et al., 2025).

Situational context plays a key role in shaping perceptions of appropriateness. Public settings typically demand stricter adherence to socially shared norms than private ones (Manokara et al., 2023). People tend to feel more emotionally uninhibited in private settings compared to public ones (Minam & Tanaka, 1995). However, some public contexts may encourage rather than restrain emotional expressiveness. For example, McRae et al. (2011) found that participants reported less emotional suppression at the Burning Man festival, a social event characterized by openness and expressive freedom.

In addition to situational variation, the ways in which emotions are expressed —or concealed—vary significantly across cultures (Ford & Mauss, 2015; Kalokerinos et al., 2017; Matsumoto et al., 2008). Collectivistic cultures often regulate emotions to preserve social harmony, either by suppressing or amplifying them, whereas individualistic cultures tend to encourage expressions that reflect internal states, emphasizing autonomy and self-expression (Li et al., 2025; Matsumoto, 1990; Ramzan, 2017).

The present study examined how the perceived appropriateness of expressing enthusiasm is associated with the subjective experience of the emotion. We define perceived appropriateness as individuals' judgments about whether it is socially acceptable to express enthusiasm in a given context. Based on the notion that individuals may feel less inhibited and therefore more open to experiencing enthusiasm when emotional expression aligns with social norms (Fernandes & Tone, 2021; Gross & Levenson, 1997; McRae et al., 2011), we propose that individuals will experience greater enthusiasm in contexts where its expression is perceived more appropriate.

Examining the relationship between the experience of enthusiasm and perceived appropriateness is relevant for several reasons. Positive emotions, in general, are strongly linked to individual well-being (Fredrickson, 2009). In organizational contexts, shared expectations to express positive emotions, have been associated with increased employee retention over time (Nguyen et al., 2024). Moreover, the expression and amplification of

positive emotions can facilitate goal attainment in workplace interactions (Wong et al., 2013). Among positive emotions, enthusiasm may be especially impactful due to its energizing and socially contagious qualities. It not only motivates individuals to pursue meaningful goals but also exerts important interpersonal effects (Vogelaar et al., 2025a). For example, teacher enthusiasm has been shown to enhance students' interest (Keller et al., 2014), intrinsic motivation, (Moè, 2016; Patrick et al., 2000), vitality (Patrick et al., 2000), and recall (Moè, 2016). More recently, Valentín et al. (2022) demonstrated that videos of enthusiastic teachers increased elementary school children's intrinsic motivation and academic achievement. Similarly, in organizational settings, the enthusiasm of a sales training instructor was found to boost employees' intentions to implement positive change (Arndt & Wang, 2014). These findings highlight that enthusiasm benefits not only the individual but also functions as a social catalyst.

The present research

Experienced enthusiasm and perceived appropriateness across three contexts and 51 societies

The current study investigated how social context relates to the experience of enthusiasm and whether this relationship is associated with perceived appropriateness of expressing enthusiasm. Studying these conditions contribute to both psychological theory and practical applications across educational, organizational, and interpersonal domains. To address this, the present research draws on data from a large-scale and world-wide survey conducted across 51 societies. In line with prior research suggesting that socially shared norms are less restrictive in private than public settings (Manokara et al., 2023), we expected that enthusiasm is perceived as more appropriate in private contexts and that higher perceived appropriateness is associated with stronger experiences of enthusiasm. We tested these expectations across three contexts (private, work, and public) using cross-cultural survey data from 51 societies. Based on our preregistration[18], we formulated the following hypotheses:

[18] https://osf.io/6cj9w

H1. Experienced enthusiasm is higher in private contexts than in public and work contexts. We additionally explored differences between the work and public contexts.
H2. Perceived appropriateness of expressing enthusiasm is higher in private contexts than in public and work contexts. We additionally explored differences between the work and public contexts.
H3. Experienced enthusiasm is positively associated with perceived appropriateness of expressing enthusiasm. We further conducted an exploratory analysis examining whether this association is moderated by context, using an interaction model including perceived appropriateness, context, and their interaction.
H4. There is an indirect relationship between context and experienced enthusiasm through perceived appropriateness of expressing enthusiasm.

Finally, we explored cross-cultural differences in both experienced enthusiasm and perceived appropriateness. For this purpose, we also related our analyses to two indicators of cultural differences between the 51 societies, the society-level indicators of individualism-collectivism, and power distance, as identified in previous research by Hofstede (2011). The individualism-collectivism dimension classifies societies on the extent to which people perceive themselves as independent from, or interdependent with, others in their society. Power distance is the extent to which unequal distributions of power are accepted and expected. We explored a relation between these two dimensions because we envisaged that these might impact the extent to which individuals would be influenced by norms set by others and society. Perceived appropriateness of enthusiasm might be stronger in societies with higher scores of collectivism (e.g., because of a greater concern for the collective) and power distance (e.g., because of a greater willingness to defer to the rules set by society). However, in the absence of prior empirical research on this matter, we refrained from formulating hypotheses, and preregistered these analyses as being explorative.

Method

Participants

Participants were recruited through the Toluna Panel, using both its proprietary panel and affiliated third-party providers. The target was 12,750 participants from 51 societies (~250 per society), stratified by age and gender. Recruitment took place between December 2020 and February 2021. In total, 16,659 participants were enrolled, exceeding the initial target due to the panel provider's oversampling to compensate for anticipated exclusions.

Exclusion criteria were: (i) failing a general attention check (e.g., "This is a quality check to see if you are reading this survey carefully. Please do not answer this question."), and (ii) incorrectly answering two comprehension questions from an unrelated concurrent study (Romano et al., 2022). After these exclusions, data from 12,863 participants remained. A second exclusion removed cases with missing responses on any enthusiasm items, yielding a final dataset of 12,851 participants across 51 societies. Of these, data from 253 respondents from South Africa were excluded from exploratory analyses on individualism-collectivism and power distance due to incomplete Hofstede scores, resulting in an analytic sample of 12,598 participants. Descriptive statistics for all societies are presented in Table 1.

Table 1

Sample Desciptives per Society

Country	*N*	*% Female*	**Age** *M (SD)*	**Exp. Enth. Priv.** *M (SD)*	**Exp. Enth. Work** *M (SD)*	**Exp. Enth. Publ.** *M (SD)*	**App. Enth. Priv.** *M (SD)*	**App. Enth. Work** *M (SD)*	**App. Enth. Publ.** *M (SD)*
Algeria	198	29.29%	36.77 (10.78)	5.36 (1.11)	5.82 (1.47)	5.23 (1.38)	5.33 (1.20)	5.48 (1.48)	5.22 (1.33)
Argentina	230	55.22%	37.22 (12.57)	5.49 (1.42)	5.00 (1.57)	4.99 (1.68)	3.98 (2.00)	4.98 (1.67)	5.13 (1.71)
Australia	254	53.94%	44.18 (12.74)	4.82 (1.53)	4.37 (1.70)	4.44 (1.64)	4.67 (1.71)	5.12 (1.40)	4.93 (1.50)
Austria	254	52.36%	39.39 (13.41)	4.24 (1.50)	3.71 (1.61)	3.59 (1.50)	4.39 (1.47)	4.35 (1.43)	4.09 (1.38)
Belgium	232	52.16%	41.25 (13.19)	4.77 (1.40)	4.26 (1.60)	4.38 (1.57)	4.84 (1.62)	4.93 (1.46)	4.97 (1.43)
Brazil	252	51.19%	37.67 (12.29)	4.75 (1.78)	4.38 (1.92)	4.60 (1.81)	5.03 (1.72)	5.17 (1.54)	5.25 (1.56)
Bulgaria	251	43.03%	38.73 (11.98)	4.95 (1.55)	4.61 (1.68)	4.43 (1.70)	4.89 (1.78)	4.45 (1.72)	4.75 (1.66)
Canada	277	53.79%	44.68 (12.74)	4.66 (1.49)	4.11 (1.76)	4.23 (1.66)	4.64 (1.72)	5.14 (1.27)	5.10 (1.34)
Chile	234	62.82%	34.49 (12.09)	5.44 (1.45)	4.91 (1.64)	4.96 (1.65)	4.18 (1.94)	4.91 (1.60)	4.71 (1.66)
China	244	47.54%	37.77 (11.36)	4.92 (1.31)	4.83 (1.39)	4.68 (1.48)	5.19 (1.10)	5.02 (1.24)	4.80 (1.35)
Colombia	231	50.22%	38.73 (12.80)	5.71 (1.34)	5.45 (1.46)	5.28 (1.49)	4.09 (2.11)	5.32 (1.55)	5.32 (1.64)
Czech Republic	257	50.97%	39.41 (13.68)	4.73 (1.54)	4.16 (1.59)	4.04 (1.55)	4.21 (1.65)	4.37 (1.37)	4.10 (1.50)
Egypt	246	41.46%	35.03 (11.05)	4.80 (1.79)	4.78 (1.83)	4.02 (1.86)	4.97 (1.76)	4.50 (1.82)	3.76 (2.01)
Finland	276	51.81%	41.69 (12.75)	4.58 (1.50)	3.80 (1.74)	3.68 (1.49)	5.15 (1.43)	4.86 (1.47)	4.38 (1.57)
France	234	52.56%	43.66 (11.91)	4.82 (1.45)	4.40 (1.65)	4.46 (1.53)	4.65 (1.67)	4.63 (1.59)	4.61 (1.54)
Germany	232	51.95%	45.54 (12.37)	4.10 (1.48)	3.70 (1.62)	3.53 (1.53)	4.63 (1.29)	4.42 (1.40)	4.32 (1.39)
Greece	229	54.15%	38.42 (12.19)	4.41 (1.50)	4.00 (1.61)	4.18 (1.55)	4.17 (1.67)	4.50 (1.43)	4.65 (1.54)
Hong Kong	252	50.00%	38.69 (12.49)	4.54 (1.25)	4.43 (1.37)	4.12 (1.30)	4.52 (1.16)	4.69 (1.17)	4.25 (1.25)
Hungary	259	52.12%	40.83 (14.35)	4.78 (1.50)	4.50 (1.68)	4.01 (1.74)	4.63 (1.76)	4.23 (1.73)	4.42 (1.69)
India	225	50.22%	37.65 (12.44)	5.20 (1.47)	5.21 (1.43)	4.84 (1.52)	5.01 (1.52)	5.19 (1.48)	5.00 (1.46)
Indonesia	231	48.05%	37.90 (11.92)	5.05 (1.30)	5.06 (1.35)	4.21 (1.55)	4.92 (1.39)	4.97 (1.31)	4.32 (1.47)
Ireland	266	57.14%	40.67 (11.78)	4.90 (1.37)	4.23 (1.65)	4.29 (1.57)	4.20 (1.78)	4.93 (1.39)	4.67 (1.51)
Israel	254	47.04%	40.07 (13.14)	4.43 (1.45)	3.85 (1.60)	4.00 (1.55)	3.89 (1.92)	4.80 (1.43)	5.00 (1.49)
Italy	258	50.78%	40.91 (13.01)	4.76 (1.47)	4.30 (1.73)	4.36 (1.57)	5.14 (1.46)	4.87 (1.51)	4.95 (1.52)
Japan	225	39.11%	43.00 (11.23)	4.01 (1.40)	3.88 (1.51)	3.08 (1.35)	4.07 (1.23)	4.38 (1.30)	3.55 (1.35)
Kenya	248	58.47%	31.43 (9.33)	5.29 (1.78)	5.11 (1.64)	4.57 (1.79)	4.27 (2.05)	5.24 (1.71)	4.76 (1.80)
Malaysia	258	45.35%	37.28 (12.00)	4.93 (1.44)	4.70 (1.56)	4.28 (1.59)	4.45 (1.60)	5.03 (1.44)	4.43 (1.53)
Mexico	250	50.80%	37.57 (12.03)	5.75 (1.37)	5.54 (1.44)	5.42 (1.48)	4.12 (2.03)	5.59 (1.43)	5.58 (1.52)
Morocco	253	35.18%	30.77 (9.41)	4.95 (1.72)	4.79 (1.88)	4.43 (1.96)	4.70 (1.75)	4.72 (1.91)	3.92 (1.97)
Netherlands	239	53.56%	42.50 (12.54)	5.00 (1.30)	4.44 (1.43)	4.50 (1.32)	4.94 (1.60)	5.04 (1.31)	4.93 (1.36)
Nigeria	225	71.56%	30.20 (10.56)	5.43 (1.65)	5.20 (1.73)	4.29 (1.90)	4.20 (2.08)	5.22 (1.70)	4.62 (1.82)
Peru	267	52.43%	34.09 (11.14)	5.64 (1.47)	5.38 (1.55)	5.26 (1.61)	3.82 (2.01)	5.02 (1.72)	4.94 (1.75)
Poland	252	48.81%	38.45 (13.08)	4.73 (1.33)	4.26 (1.46)	4.32 (1.44)	4.29 (1.38)	3.99 (1.41)	3.92 (1.43)
Portugal	270	51.48%	40.25 (13.21)	4.89 (1.31)	4.39 (1.63)	4.59 (1.40)	4.55 (1.78)	4.89 (1.47)	4.98 (1.47)
Romania	258	49.22%	39.41 (13.54)	5.16 (1.59)	4.53 (1.66)	4.15 (1.85)	4.48 (1.80)	4.30 (1.73)	4.34 (1.83)
Russia	237	51.05%	40.77 (12.46)	4.36 (1.57)	4.65 (1.49)	3.98 (1.53)	4.80 (1.48)	5.10 (1.54)	4.18 (1.55)
Saudi Arabia	236	47.88%	34.03 (9.78)	4.87 (1.52)	4.69 (1.69)	4.39 (1.68)	4.83 (1.52)	4.77 (1.59)	4.15 (1.75)
Singapore	265	47.55%	39.78 (12.55)	4.62 (1.38)	4.57 (1.47)	4.40 (1.51)	4.88 (1.26)	5.01 (1.24)	4.72 (1.38)
South Africa	253	52.57%	37.48 (12.89)	5.20 (1.54)	4.78 (1.67)	4.80 (1.55)	4.35 (1.98)	5.23 (1.50)	5.15 (1.57)
South Korea	260	45.00%	40.59 (11.87)	4.25 (1.28)	3.85 (1.37)	3.63 (1.44)	4.57 (1.29)	4.23 (1.30)	3.99 (1.27)
Spain	253	46.25%	40.45 (12.27)	4.94 (1.41)	4.45 (1.50)	4.59 (1.41)	4.47 (1.72)	4.86 (1.38)	5.02 (1.45)
Sweden	241	50.21%	43.59 (13.29)	4.32 (1.60)	3.85 (1.77)	3.79 (1.56)	4.58 (1.56)	4.82 (1.37)	4.32 (1.51)
Switzerland	282	53.55%	41.60 (13.01)	4.62 (1.46)	4.15 (1.50)	3.84 (1.55)	4.71 (1.52)	4.48 (1.48)	4.13 (1.51)
Taiwan	290	46.55%	36.88 (12.08)	4.56 (1.38)	4.41 (1.50)	4.24 (1.45)	4.84 (1.31)	5.14 (1.22)	4.78 (1.29)
Thailand	311	50.16%	39.84 (13.04)	5.57 (1.30)	5.68 (1.26)	4.79 (1.40)	5.20 (1.35)	5.56 (1.36)	4.75 (1.40)
Tunisia	298	39.60%	40.55 (11.92)	5.20 (1.27)	5.51 (1.32)	5.09 (1.31)	4.99 (1.37)	5.51 (1.27)	5.10 (1.34)
Turkey	270	52.96%	35.33 (11.43)	4.64 (1.60)	4.33 (1.68)	4.46 (1.62)	3.82 (1.73)	4.03 (1.68)	3.98 (1.63)
United Arab Emirates	270	46.67%	34.24 (10.30)	4.95 (1.46)	4.63 (1.50)	4.57 (1.54)	4.77 (1.65)	4.76 (1.60)	4.50 (1.65)
United Kingdom	262	53.82%	43.02 (13.32)	4.81 (1.50)	4.18 (1.73)	4.32 (1.63)	4.63 (1.49)	4.88 (1.38)	4.73 (1.44)
United States of America	229	51.53%	44.00 (14.07)	5.18 (1.76)	4.66 (2.05)	4.94 (1.86)	4.86 (1.94)	5.16 (1.62)	5.18 (1.73)
Vietnam	273	51.65%	33.34 (9.62)	5.43 (1.29)	5.42 (1.27)	4.75 (1.51)	4.85 (1.48)	5.12 (1.36)	4.82 (1.44)

Exp. Enth. Priv. = Experience Enthusiasm Private

Exp. Enth. Work = Experience Enthusiasm Work

Exp. Enth. Publ. = Experience Enthusiasm Public

App. Enth. Priv. = Appropriateness Enthusiasm Private

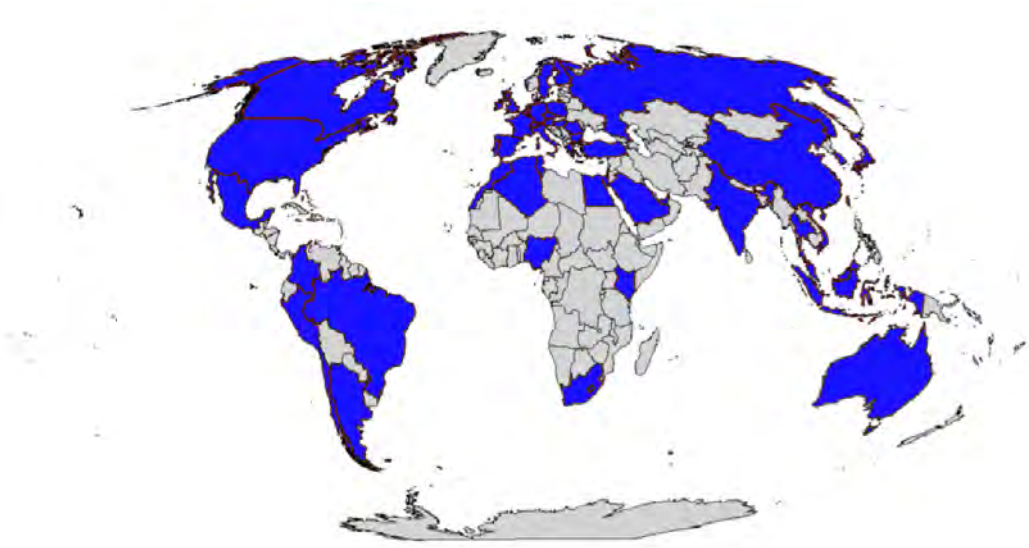
App. Enth. Work = Appropriateness Enthusiasm Work

App. Enth. Publ. = Appropriateness Enthusiasm Public

Data were collected in the following societies: Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Colombia, Czech Republic, Egypt, Finland, France, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Kenya, Malaysia, Mexico, Morocco, Netherlands, Nigeria, Peru, Poland, Portugal, Romania, Russian Federation, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Tunisia, Turkey, United Arab Emirates, United Kingdom, United States, and Vietnam.

Figure 1

World Map Displaying Societies Included in the Study in Blue



Ethics and preregistration

The collection of the data for the current study was embedded in a broader survey study that also collected other survey data. This omnibus study was reviewed and approved by the Psychology Research Ethics Committee of Leiden University (application number: 2020-02-03-A.Romano-V1-2068). A detailed description of this study's aims and analytic

strategy can be found in the preregistration, available at https://osf.io/v7qc2. Although the preregistration initially stated that data from participants who failed two comprehension checks embedded in an unrelated task would be retained, we opted to exclude these data before analysis to ensure overall data quality. We also excluded data from participants with incomplete responses on key variables relevant to this study (e.g., missing values on any of the enthusiasm items). It should be noted that the preregistration regarding the current study's analysis and hypotheses was completed after data collection but prior to data analysis.

Procedure

Data were collected online. The questionnaire was developed in English and then translated into the local languages of participants by experts and professional translators to ensure conceptual equivalence across languages. After providing informed consent, participants first completed a behavioral task unrelated to the present study (Romano et al., 2022). They then answered items central to this study, including questions about their experience of enthusiasm and their perceptions of the appropriateness of expressing enthusiasm across three different social contexts. Finally, participants completed additional measures not analyzed here and provided demographic information.

Measures

Experienced enthusiasm

Participants reported the extent to which they experienced enthusiasm in three social contexts using the following items: "I often experience enthusiasm in my private life," "I often experience enthusiasm during my work," and "I often experience enthusiasm in public (for example, in a restaurant or a park)." Enthusiasm was defined in the survey as "a feeling of energetic interest in a particular subject or activity and an eagerness to be involved in it." Responses were given on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Perceived appropriateness of expressing enthusiasm

To assess perceived appropriateness of expressing enthusiasm, participants rated how appropriate they believed it was to express enthusiasm in the same three contexts. The items were: "For people in my country, it is appropriate to express enthusiasm in private," "… at work," and "… in public (for example, in a restaurant or a park)." These items were also rated on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Individualism-Collectivism and power distance

Data on individualism-collectivism and power distance for the United Arab Emirates, Egypt, Algeria, Nigeria, Saudi Arabia, Tunisia, and Kenya were obtained from Hofstede Insights' Country Comparison Tool[19]. For all other societies, scores were drawn from the Geert Hofstede Dimension Data Matrix[20]. Higher values indicate stronger individualistic tendencies, whereas lower values reflect a more collectivistic orientation. All scores were last verified on September 19, 2022.

Results

Hypothesis 1

Hypothesis 1 (H1) predicted that experienced enthusiasm would differ across contexts (private, work, public). Mauchly's test indicated a violation of the sphericity assumption ($W = .982$, $p < .001$); therefore, the Greenhouse–Geisser correction was applied. A repeated measures ANOVA revealed a significant main effect of context, $F(1.97, 25{,}247) = 749.48$, $p < .001$, partial $\eta^2 = .055$. Planned pairwise comparisons showed that experienced enthusiasm was highest in the private context ($M = 4.89$, $SD = 1.52$), significantly higher than in both the work context ($M = 4.58$, $SD = 1.68$; $t(12{,}850) = 25.05$, $p < .001$), and the public context ($M = 4.39$, $SD = 1.64$; $t(12{,}850) = 38.50$, $p < .001$). This supports H1, which predicted that experienced enthusiasm would be strongest in private settings. Although not hypothesized, experienced enthusiasm was also significantly higher in the work than in the public context, $t(12{,}850) = 13.97$, $p < .001$.

[19] Hofstede Insights Country comparison tool: https://www.hofstede-insights.com/country-comparison
[20] Dimension data matrix [dataset]. https://geerthofstede.com/research-and-vsm/dimension-data-matrix

Hypothesis 2

Hypothesis 2 (H2) proposed that perceived appropriateness of expressing enthusiasm would be higher in private contexts compared to work and public contexts. Mauchly's test again indicated a violation of sphericity, $W = .867$, $p < .001$, so the Greenhouse–Geisser correction was applied. A repeated measures ANOVA revealed a significant effect of context, $F(1.77, 22{,}678) = 176.48$, $p < .001$, partial $\eta^2 = .014$. Contrary to H2, perceived appropriateness was rated highest in the work context ($M = 4.86$, $SD = 1.53$), significantly higher than in both private contexts ($M = 4.60$, $SD = 1.68$; $t(12{,}850) = 16.50$, $p < .001$) and public contexts ($M = 4.63$, $SD = 1.60$; $t(12{,}850) = 18.80$, $p < .001$). The difference between private and public contexts was not statistically significant, $t(12{,}850) = 1.82$, $p = .069$.

Interestingly, while Hypothesis 2 predicted higher perceived appropriateness in private contexts, our results revealed a different pattern, with work contexts rated as more appropriate. This discrepancy likely reflects differing social functions and expectations across settings, an issue we will return to in the discussion.

Hypothesis 3

Hypothesis 3 (H3) predicted a positive association between perceived appropriateness and experienced enthusiasm. Three linear regressions confirmed significant positive associations in all three contexts: private, $\beta = .23$, $t(12{,}851) = 26.39$, $p < .001$, $R^2 = .051$; work, $\beta = .38$, $t(12{,}851) = 46.33$, $p < .001$, $R^2 = .143$; and in the public context, $\beta = .47$, $t(12{,}851) = 59.48$, $p < .001$, $R^2 = .216$. These results supported H3, showing that perceived appropriateness consistently predicts stronger experienced enthusiasm.

As preregistered, we also tested whether this relationship varied by context. A univariate general linear model (GLM) with context, perceived appropriateness, and their interaction as predictors confirmed a main effect of perceived appropriateness, $F(1, 38{,}547) = 5886.55$, $p < .001$, as well as a significant interaction, $F(2, 38{,}547) = 313.21$, $p < .001$. The strength of the association differed by contexts: in the private context, $\beta = .20$, 95% CI [.19, .22], $t(25{,}698) = 26.63$, $p < .001$; in the work context, $\beta = .41$, 95% CI [.39, .43], $t(25{,}698) = 47.81$, $p < .001$; and in the public context, $\beta = .47$, 95% CI [.46, .49], $t(38{,}547) = 57.79$, $p < .001$. Pairwise comparisons confirmed that the slope in public was significantly

stronger than in private, $\Delta\beta = .27$, $t(38{,}547) = 23.81$, $p < .001$, and stronger than in work, $\Delta\beta = .06$, $t(38{,}547) = 5.23$, $p < .001$. The slope in work was likewise significantly stronger than in private, $\Delta\beta = .06$, 95% CI [.04, .09], $t(25{,}698) = 5.20$, $p < .001$. Taken together, these results indicate that the appropriateness–enthusiasm association was weakest in private, moderate in work, and strongest in public settings.

Hypothesis 4

To test Hypothesis 4 (H4), we examined whether the relationship between context and experienced enthusiasm could be accounted for by an indirect pathway through perceived appropriateness. Three analyses were conducted using Hayes's (2022) PROCESS macro (Model 4), with 5,000 bootstrap resamples. In each analysis, context (coded as 0 and 1) served as the independent variable, perceived appropriateness of enthusiasm was the indirect pathway, and experienced enthusiasm as the dependent variable.

In the private-work comparison, a significant indirect pathway was found, $ab = 0.079$, $SE = 0.006$, 95% CI [0.067, 0.092]. The total effect was significant, $b = –0.308$, $SE = 0.020$, $p < .001$, as was the direct effect, $b = –0.387$, $SE = 0.019$, $p < .001$. These results indicate that the association between context and experienced enthusiasm in the private-work comparison was partially carried through an indirect pathway via perceived appropriateness. For private versus public, the indirect effect was nonsignificant, $ab = 0.011$, $SE = 0.007$, 95% CI [–0.003, 0.024], although the total effect was significant, $b = –0.501$, $SE = 0.020$, $p < .001$, and the direct effect, $b = –0.512$, $SE = 0.019$, $p < .001$, were significant. This non-significant result indicates that there was no evidence of an indirect pathway through perceived appropriateness for the private–public comparison. In the work-public comparison, a significant negative indirect effect emerged, $ab = –0.104$, $SE = 0.009$, 95% CI [–0.123, –0.086], along with a significant total effect, $b = –0.193$, $SE = 0.021$, $p < .001$, and direct effect, $b = –0.089$, $SE = 0.019$, $p < .001$, indicating that the difference between work and public contexts was partially carried through an indirect pathway via perceived appropriateness.

Overall, these results partially support H4: perceived appropriateness accounted for differences in experienced enthusiasm in two of the three comparisons. Notably, the negative indirect pathway in the work–public comparison suggests that lower perceived

appropriateness in public settings contributes to reduced enthusiasm compared with work contexts. This pattern fits the regulatory function of perceived appropriateness: even though appropriateness positively predicts enthusiasm within each context, lower appropriateness in certain settings can suppress emotional engagement.

In the private versus work comparison, the positive indirect effect indicates that higher perceived appropriateness at work would be expected to increase enthusiasm in this context. Yet despite this pathway, overall enthusiasm remained higher in private settings, reflecting the stronger direct effect of context. Considered together with the context by appropriateness interaction reported above, the results suggest that perceived appropriateness has a stronger association with experienced enthusiasm in work settings, whereas in private settings enthusiasm is less contingent on appropriateness.

The indirect pathway was strongest in the work–public comparison, suggesting that appropriateness plays a more pronounced role in differentiating emotional expression in socially regulated settings than in private ones.

Cross-cultural differences in experienced enthusiasm and perceived appropriateness

To examine whether the expression of enthusiasm and beliefs about its appropriateness vary across cultures, and to justify including cultural variables (individualism-collectivism and power distance) in subsequent analyses, we first assessed the proportion of variance in key variables attributable to between-society differences. Intraclass correlation coefficients (ICCs) revealed that societal-level variance accounted for 7.1% of the variability in experienced enthusiasm in private contexts, 10.1% in work contexts, and 8.2% in public contexts. For perceived appropriateness, the corresponding values were 4.9%, 6.0%, and 7.6%, respectively. These results suggest that a meaningful proportion of variance in both experienced enthusiasm and perceived appropriateness is attributable to differences between societies.

Next, we explored how cultural values relate to these differences using society-level regressions with Hofstede's individualism-collectivism and power distance scores as predictors of experienced enthusiasm and perceived appropriateness across the three contexts. For experienced enthusiasm, several associations emerged. Higher society-levels of individualism predicted weaker experienced enthusiasm in private (b = –0.006,

SE = 0.002, *p* = .019) and work contexts (*b* = –0.012, *SE* = 0.003, *p* < .001) and showed a non-significant effect in public contexts (*b* = –0.006, *SE* = 0.003, *p* = .054). Conversely, higher society-levels of power distance were positively associated with experienced enthusiasm across all three contexts: private (*b* = 0.008, *SE* = 0.003, *p* = .004), work (*b* = 0.016, *SE* = 0.003, *p* < .001), and public (*b* = 0.009, *SE* = 0.003, *p* = .008). For perceived appropriateness, neither individualism-collectivism nor power distance showed significant associations in any context. Individualism-collectivism coefficients were: private (*b* = 0.002, *SE* = 0.002, *p* = .476), work (*b* = –0.003, *SE* = 0.002, *p* = .194), and public (*b* = 0.0002, *SE* = 0.003, *p* = .951). Power distance coefficients were: private (*b* = 0.003, *SE* = 0.003, *p* = .265), work (*b* = 0.004, *SE* = 0.003, *p* = .163), and public (*b* = –0.0004, *SE* = 0.003, *p* = .897).

Overall, these findings suggest that while perceived appropriateness of expressing enthusiasm showed limited variation across societies in relation to individualism-collectivism and power distance, the experience of enthusiasm itself was more strongly associated with these specific cultural dimensions.

Discussion

The present study examined how perceived appropriateness of expressing enthusiasm relates to the actual experience of this emotion across private, work, and public contexts in 51 societies. We found that perceived appropriateness was positively associated with experienced enthusiasm in all three contexts. However, the strength of this association varied, being strongest in public settings and weakest in private settings. Contrary to expectations, ratings of perceived appropriateness were highest in work contexts. Analyses further indicated that appropriateness partially explained differences in experienced enthusiasm between contexts, although this relationship was not consistent across all comparisons.

The weaker association between perceived appropriateness and experienced enthusiasm in private contexts suggests that individuals rely less on external social norms and perhaps more on their internal emotional states in these settings. Private environments,

often characterized by familiarity and psychological safety, may allow emotions to emerge spontaneously, regardless of social evaluation. This interpretation aligns with previous research showing that private contexts reduce the salience of normative concerns and promote authentic emotional expression (Kahn, 1990; Matsumoto et al., 2008).

In public contexts, perceived appropriateness judgments are more strongly linked to experienced enthusiasm, likely because expressing high-arousal positive emotions depends more on social acceptance in the presence of strangers or loosely connected others. Even when enthusiasm is considered appropriate in public, uncertainty about others' evaluations may lead individuals to inhibit its display, which in turn can dampen the experience of the emotion itself.

Work contexts present an intriguing contrast. Although work settings were rated as most appropriate for expressing enthusiasm, actual experiences of enthusiasm were weaker than in private contexts. This suggests that high perceived appropriateness at work may reflect prescriptive norms rather than genuine emotional engagement. In some organizational cultures, enthusiasm is considered a desirable display associated with professionalism, motivation, and teamwork. However, when employees feel compelled to express enthusiasm without genuinely experiencing it, this can create emotional dissonance, which has been linked to negative outcomes such as emotional exhaustion and reduced job satisfaction (Goldberg & Grandey, 2007; Taxer & Frenzel, 2018). Thus, promoting enthusiasm in the workplace may be beneficial, but pressuring employees into inauthentic displays can undermine well-being and effectiveness.

Cross-cultural analyses showed that individualism–collectivism and power distance were not significantly associated with perceived appropriateness. In the introduction we considered the possibility that collectivism, through a greater concern for the collective, and power distance, through a greater willingness to defer to societal rules, might be associated with stronger perceptions of appropriateness. Our analyses did not support this assumption, as cross-national differences in perceived appropriateness were limited. However, both dimensions were related to experienced enthusiasm. Higher society-levels of individualism predicted weaker experienced enthusiasm in private and work contexts, whereas higher levels of power distance were associated with stronger experienced enthusiasm across all contexts. These findings suggest that cultural value dimensions can

shape the experience of high-arousal positive emotions, though the underlying mechanisms remain unclear. Future research integrating insights from anthropology and cross-cultural psychology might be useful in exploring these relationships further.

Overall, these findings highlight that enthusiasm, as a high-arousal and socially expressive emotion, is particularly sensitive to the interplay of social norms, contextual constraints, and cultural values. The results extend existing research on positive emotions by demonstrating that the same emotion can be experienced differently depending on whether the social environment supports or constrains its expression, and that these effects vary systematically by context.

Limitations and future directions

Several limitations of the current study should be noted. First, we did not include a direct measure of expressed enthusiasm. Although we assessed perceived appropriateness and experienced enthusiasm, the lack of behavioral data limits our ability to link social norms directly to actual displays of enthusiasm. This limitation was due to space constraints in the omnibus survey from which our data were drawn.

It is also important to note that the present study specifically examined perceived appropriateness as one aspect of how enthusiasm is socially regulated. This focus aligns with the idea that display rules shape emotional expression (Ekman & Friesen, 1969; Matsumoto, 1990; Matsumoto et al., 2008) yet display rules can encompass more than general judgments of appropriateness. They may also specify how emotions may be displayed and with what intensity. For example, display rules may not only prescribe whether enthusiasm should be expressed, but also whether it should be shown through verbal excitement, through visible energy and gestures, or in a more modest form. Future research could therefore extend the current approach by mapping out more detailed display rules, for instance by explicitly asking participants how they believe enthusiasm should be expressed in different contexts.

Second, the simultaneous collection of our key measures limits causal inferences and thus cautions against overinterpretation of the PROCESS-based indirect effect analyses. While appropriateness judgments were associated with experienced enthusiasm, it is also possible that individuals experiencing greater enthusiasm perceive its expression as more

appropriate. Experimental studies systematically varying appropriateness norms would help clarify the direction of this relationship.

Third, the main measures relied on self-report, which may be influenced by social desirability or memory biases. Fourth, although the sample was large and culturally diverse, society-level measures of cultural dimensions may have underestimated within-society variability, limiting the ability to detect finer-grained cultural effects. Fifth, a potential methodological explanation for the lack of significant associations between cultural dimensions and perceived appropriateness is restricted variance in perceived appropriateness ratings. Whereas experienced enthusiasm showed substantial cross-societal variation (ICCs ranging from 7.1% to 10.1%), between-society variance in perceived appropriateness was smaller (ICCs between 4.9% and 7.6%), which could weaken statistical associations.

Future research could address these limitations in several ways. Including measures of expressed enthusiasm alongside perceived appropriateness and experienced enthusiasm would allow for a more comprehensive understanding of how social norms are associated with felt and displayed emotions. Examining the role of relationship closeness more explicitly may also be informative, as prior research suggests that the nature of the relationship between expresser and perceiver can shape appropriateness judgments more strongly than the physical setting alone (Manokara et al., 2023). Investigating how interpersonal factors interact with broader cultural and contextual influences could provide a fuller understanding of the regulation of enthusiasm. Finally, longitudinal or daily diary studies could capture how perceived appropriateness, expression, and experience of enthusiasm fluctuate in real time across different social encounters.

Conclusion

This study demonstrates that perceived appropriateness is consistently associated with experienced enthusiasm, although the strength and nature of this relationship vary across social contexts. Private, work, and public settings differ not only in average levels of experienced enthusiasm and perceived appropriateness but also in how strongly these constructs are linked, highlighting the nuanced ways social norms, context, and culture interact to shape emotional experience. Moreover, cross-cultural analyses revealed that

while perceived appropriateness showed little variation across societies, experienced enthusiasm was influenced by individualism and power distance, emphasizing the role of cultural values in shaping emotional experience.

Chapter 5

Discussion

The present dissertation set out to advance the scientific understanding of enthusiasm by examining its structure, functions, and social regulation. As documented in the historical and philosophical overview that I provided in the introductory chapter, enthusiasm has long occupied an ambiguous position. It was celebrated as a divine spark in ancient Greek thought, feared as a source of religious excess during the Enlightenment, and revalued in Romanticism as a creative force. In modern contexts, it is sometimes framed as a driver of motivation in professional and educational domains, yet it is also regarded with suspicion when displayed in inauthentic, exaggerated, or manipulated forms.

My own professional experience in applied research, combined with growing empirical evidence, suggests that enthusiasm plays a meaningful role across domains and warrants closer scientific examination. In education, teachers' enthusiasm enhances student enjoyment and learning outcomes; in organizational settings, leaders' enthusiastic displays increase follower motivation and team performance; in consumer research enthusiasm predicts brand engagement and loyalty; while in politics it drives voter mobilization and sustains civic participation.

While these insights assign a prominent role to enthusiasm, systematic research on enthusiasm remains relatively limited. Compared with the extensive work on negative emotions and on more commonly studied positive states, enthusiasm has received far less empirical attention. The studies that have been conducted are dispersed across different disciplines and employ varied approaches, making it difficult to integrate their insights into a coherent understanding. This fragmentation highlights the need for developing a clearer and more integrative account of enthusiasm as a psychological construct, which this dissertation has sought to provide. To address this lacuna, the empirical chapters presented in this dissertation examined enthusiasm from three complementary angles: its internal structure as revealed through prototype analyses, its appraisal patterns and response types in comparison with related positive emotions, and its experience and perceived appropriateness across contexts and cultures. The remainder of this chapter integrates these findings and reflects on their broader implications.

Summary of the findings

Chapter 2: What is the structure of enthusiasm?

The first empirical contribution of this dissertation was a set of five studies that employed prototype methodology to examine the internal structure of enthusiasm. Prototype analysis offers a way to uncover how laypeople conceptualize a psychological construct, identifying the most central features that define it and distinguishing these from more peripheral or idiosyncratic associations. Applying this approach to enthusiasm was intended to determine whether it is cognitively represented as a coherent emotion concept, and if so, what its defining characteristics are.

Study 1.1 provided the building blocks by asking participants to freely generate features of enthusiasm. The generated features covered a wide spectrum, ranging from affective states such as joy and good feeling to motivational elements like drive and eagerness, to expressive behaviors such as smiling, laughing, and talking loudly, and finally to interpersonal aspects such as inspiring others and spreading positivity. These responses were compiled into 28 feature categories. Study 1.2 examined which of the features identified in Study 1.1 were considered most central to the concept of enthusiasm. Participants rated features such as joy, motivation, and eagerness as most typical, indicating that positive valence, high arousal, and goal orientation are core components of enthusiasm. Interpersonal features such as laughing, being sociable, and sharing were also rated as central, indicating that enthusiasm is not merely a private feeling but also an outward-facing, socially oriented state. By contrast, features such as impatience, restlessness, and naivety were rated as peripheral, indicating that while some people associate them with enthusiasm, they are not seen as defining. Together, these results established the central-peripheral distinction, with 14 central and 14 peripheral features.

Study 2.1 confirmed that central features of enthusiasm are cognitively more accessible than peripheral ones. Participants read sentences linking enthusiasm to either central or peripheral features, completed a filler task, and were then tested on both free recall and recognition. Central features were more often falsely recalled than peripheral features, while no significant difference emerged in correct free recall. Signal detection

analyses further indicated that participants were more biased toward recognizing central features. Study 2.2 showed that participants were quicker and more consistent in identifying central features as characteristic of enthusiasm. Although peripheral features were also recognized as related, they were less consistently and more slowly classified. Study 2.3 showed that the prototype structure is also reflected in people's real-life experiences. Participants recalled either an enthusiastic episode or a neutral everyday situation and subsequently rated the presence of central and peripheral features in that situation. Both types of features were reported as more present in enthusiastic than in neutral episodes, and central features were consistently rated as more present than peripheral ones. However, the interaction between condition and feature type was not significant, suggesting that the relative salience of central features holds across contexts. A possible explanation is that when people are asked to recall an ordinary weekday, they may nonetheless be inclined to recall a moment that involved enthusiasm, thereby reducing the contrast between conditions.

Together, the five studies establish that enthusiasm is cognitively represented as a structured prototype characterized by four core elements: positive valence, high arousal, goal conduciveness, and interpersonal orientation. The convergence across independent samples (panel members, students), multiple methods (generation, ratings, recall, recognition, reaction time, autobiographical recall), and substantial participant numbers provides strong evidence for the robustness of this structure. Importantly, the inclusion of interpersonal features among the central elements marks a novel contribution, suggesting that enthusiasm is not only an intrapersonal state but also fundamentally social.

Chapter 3: What is the profile and distinctiveness of enthusiasm?

The second empirical chapter of this dissertation explored the unique characteristics of enthusiasm by examining its cognitive appraisals and response tendencies. It also compared enthusiasm with two closely related positive emotions: joy and hope. Although these emotions are partially overlapping in their experiential and motivational features, little is known about how enthusiasm differs from them in terms of how it is appraised and what kinds of responses it elicits.

Study 1 focused on the cognitive appraisal structure of enthusiasm in comparison to joy and hope. Using an autobiographical task, participants recalled and described an event in which they had felt enthusiasm (or joy or hope). The findings revealed that enthusiasm typically arises in pleasurable, intense situations that are closely linked to desirable goals. Participants also reported feeling connected to something personally meaningful and experienced a strong urge to share their enthusiasm with others. Situations in which enthusiasm was felt were generally perceived as socially safe and appropriate for emotional expression. They appraised the environment as supportive and saw their display of enthusiasm as aligning with prevailing social norms. These findings suggest that enthusiasm not only prepares individuals for goal-directed action, but also exhibits a strong interpersonal dimension rooted in social sharing and norm sensitivity. Compared to joy, enthusiasm was less about enjoying the fulfillment of a goal and more about the energizing prospect of achieving it. Compared to hope, enthusiasm was associated with greater certainty, stronger perceived control, and more immediate relevance, suggesting that it is experienced when outcomes are not only desired but also within reach, expected, and actionable.

Study 2 examined, again with an autobiographical task, the response tendencies associated with enthusiasm (or joy and hope) and found that it evokes a highly active and outward-directed motivational profile. Participants described enthusiasm as an energetic state marked by smiling, presence, and thoughts of positive outcomes. This fits with the notion that enthusiasm prepares individuals for confident engagement and immediate action. In contrast, joy was more often linked to savoring, connection, and emotional fulfillment following goal achievement. Hope, on the other hand, prompted more passive or reflective responses, such as waiting or internal coping in the face of uncertain outcomes. Enthusiasm thus stands out as the most action-oriented of the three emotions, propelling people to act when success appears both desirable and attainable.

Together, these findings indicate that enthusiasm is a distinct positive emotion characterized by a combination of high intensity, goal orientation, and social expressiveness. It typically arises in situations that are perceived as both meaningful and attainable, marked by a sense of control, low uncertainty, and energizing anticipation. Enthusiasm involves a readiness to act, frequent smiling, and a desire to share one's

feelings, especially when the social environment is perceived as safe and supportive. Unlike joy, which tends to follow goal attainment, or hope, which emerges under uncertainty and distance, enthusiasm is experienced when goals are within reach and action feels both appropriate and rewarding. This unique configuration of appraisals and response tendencies supports the classification of enthusiasm as a separate emotional state within the broader spectrum of positive affect.

Chapter 4: Social norms and the experience of enthusiasm

This chapter examines how the perceived appropriateness of expressing enthusiasm relates to the subjective experience of the emotion across different social contexts and cultures. Drawing on a large-scale cross-cultural survey (N = 12,851) conducted in 51 societies across the globe, the study tested the idea that enthusiasm, as a socially expressive and high-arousal emotion, is regulated by social norms and context-specific expectations.

Respondents completed two sets of ratings across three social contexts: private life, work settings, and public spaces. First, they indicated how often they experienced enthusiasm in each of these contexts. Second, they rated how appropriate they considered it to openly express enthusiasm in each of the same contexts. Results showed that experienced enthusiasm was highest in private settings, followed by work and public contexts. This supported the hypothesis that enthusiasm is more likely to be experienced in situations characterized by familiarity and psychological safety. However, contrary to expectations, perceived appropriateness was rated highest in work settings, rather than in private ones. This suggests that enthusiasm may be perceived as more socially expected in work settings.

Across all three contexts, perceived appropriateness was positively associated with experienced enthusiasm. However, the strength of this relationship differed by context: it was weakest in private settings, stronger in work contexts, and strongest in public settings. These differences suggest that in public life, where emotional displays are more socially scrutinized, individuals are more likely to feel enthusiastic when they believe it is appropriate. In contrast, enthusiasm in private settings appears to be less contingent on social norms. This pattern suggests that people in private contexts rely less on social norms

and more on their own feelings, as these familiar environments provide psychological safety and allow emotions to arise naturally. In public settings, however, enthusiasm depends more on how acceptable it is to show such emotions in front of others. Work settings showed yet another pattern. Although enthusiasm was considered most appropriate at work, people reported feeling less enthusiastic there than in private life. This may indicate that enthusiasm at work often reflects social expectations rather than genuine emotion. In some workplaces, enthusiasm is viewed as a professional requirement, and when employees feel obliged to display it without truly experiencing it, this can lead to emotional strain and reduced well-being.

The study also examined cultural differences using society-level indicators of individualism–collectivism and power distance. Perceived appropriateness did not vary systematically with these cultural dimensions. However, experienced enthusiasm was positively associated with collectivism in private and work settings and positively associated with power distance in all three contexts. This indicates that people in collectivistic and high power-distance societies tend to report more enthusiasm, possibly due to different emotion regulation norms or varying social expectations surrounding emotional engagement.

Taken together, these findings suggest that enthusiasm is not merely a private emotional state but is also regulated by perceptions of what is socially acceptable. Both the frequency with which enthusiasm is experienced and the extent to which it is considered appropriate to express vary systematically across settings and cultures.

Conceptual and practical reflections

The three empirical chapters of this dissertation examined enthusiasm from complementary perspectives. The prototype analysis in Chapter 2 revealed that enthusiasm is cognitively represented as a multidimensional construct, defined by positive valence, high arousal, goal conduciveness, and interpersonal orientation. Chapter 3 established that enthusiasm constitutes a distinct emotional state within the broader family of positive emotions, based on a unique profile of cognitive appraisals and response tendencies

that differentiate it from joy and hope. Chapter 4 demonstrated that the experience of enthusiasm is shaped by perceived appropriateness, which varies systematically across private, work, and public settings, and interacts with broader cultural value patterns. Together, these findings offer a coherent picture of enthusiasm as a psychological construct.

Having clarified the structural features of enthusiasm, its appraisal and response profile, and its sensitivity to social norms, the remainder of this chapter turns to a broader conceptual and practical reflection. First, a working definition of enthusiasm is proposed that synthesizes findings from the three empirical chapters. Second, the theoretical position of enthusiasm is examined by situating it within contemporary emotion theory. Third, the potential evolutionary origins and adaptive functions of enthusiasm are discussed to understand its role within a functional emotion framework. Fourth, the socially embedded nature of enthusiasm is explored, including its regulation by context-dependent norms and the moral question of whether enthusiasm should be considered inherently good or potentially problematic. Finally, the practical implications of these insights are discussed for personal development, education, leadership, organizational behavior, consumer engagement, and political participation.

Towards a working definition of enthusiasm

Although various definitions of enthusiasm exist in psychological and applied literature, as discussed in Chapter 2, they tend to emphasize its high arousal and affective tone, and sometimes its motivational potential. However, they rarely articulate its goal-related function in a consistent way, and they generally neglect its social dimension. As such, these definitions fall short of capturing the multidimensional nature of enthusiasm. Drawing on the converging results from the prototype analysis, comparative emotion studies, and contextual regulation research presented in this dissertation, I propose the following integrative definition of enthusiasm. The core definition is followed by a brief elaboration of typical situational characteristics:

Enthusiasm is a positive, energetic emotion that arises when a desirable outcome is perceived as attainable. It typically involves active engagement and outward expression, particularly in social contexts that feel safe and supportive.

This definition brings together the structural, motivational, and social dimensions of enthusiasm into a single, integrative framework. As such, it highlights the distinctiveness of enthusiasm within the broader landscape of positive emotions. As empirically demonstrated in Chapter 3, enthusiasm can be differentiated from related affective states such as joy and hope by its unique pattern of appraisals and response tendencies.

Enthusiasm in contemporary emotion theory

The definition described in the section above also provides a theoretical foundation for situating enthusiasm within contemporary emotion theory and examining how it relates to existing frameworks. In this following section, I explore how enthusiasm aligns with, extends, or diverges from prevailing models of emotion. In Scherer's (2005) componential interpretation of the circumplex model, enthusiasm is positioned as a positive, high-arousal emotion characterized by high goal conduciveness and strong coping potential, or perceived control. These dimensions are broadly consistent with the present findings, which emphasize positive valence, high energy, and goal orientation as central features. Whereas the prototype analysis did not provide direct evidence for the control dimension, the appraisal study reported in Chapter 3 did: participants typically described enthusiastic episodes as situations in which they felt in control of what was happening. Thus, across studies, enthusiasm appears not only goal-conducive but also linked to a sense of agency and efficacy.

Similarly, scholars working from an evolutionary perspective, such as Shiota et al. (2014), describe enthusiasm as an anticipatory state that motivates appetitive behavior directed toward rewarding outcomes. This view is consistent with the present definition, which emphasizes enthusiasm's anticipatory and action-oriented qualities, yet the inclusion of interpersonal orientation extends its functional interpretation beyond individual goal pursuit to encompass social coordination and shared engagement.

In contrast to its alignment with the circumplex model and evolutionary perspectives, the present findings indicate that enthusiasm does not fully conform to the assumptions of the Broaden-and-Build Theory (Fredrickson, 2001, 2013). According to this framework, positive emotions typically broaden an individual's thought–action repertoire and promote cognitive flexibility. Enthusiasm, however, appears to operate differently. Consistent with prior research (Domachowska et al., 2016; Gable & Harmon-Jones, 2008) it is characterized by high motivational intensity and a narrowed attentional focus directed toward goal-relevant cues. Rather than broadening attention, enthusiasm sharpens it, channeling energy and cognition toward meaningful action.

The function of enthusiasm

From a functional perspective, emotions are mechanisms that help organisms respond to environmental challenges and opportunities (Darwin, 1872; Frijda, 1988; Scherer, 2009). Evolutionary psychologists have described enthusiasm as a motivational amplifier that evolved to support survival-related functions such as resource acquisition (Griskevicius et al., 2010; Shiota et al., 2014). One of the most basic triggers of enthusiasm may be the anticipation of food. Humans share this excitement with many other species, suggesting that the underlying motivational system evolved hundreds of millions of years ago. The functional value of this response seems straightforward. For example, when a monkey sees bananas, it may start jumping and screeching before climbing the tree to retrieve them. From an evolutionary standpoint, enthusiasm is the emotion that activates the monkey to act and obtain the food. If the bananas merely evoked joy, the animal might simply lie in the grass and admire the fruit without acting. In such a situation, an emotion that motivates action seems useful. Furthermore, the jumping and screeching likely serve an additional social function, signaling to others in the group that food has been found and prompts collective effort to transport the bananas. This suggested elementary function of enthusiasm may also present in humans. Children often display intense enthusiasm at the prospect of receiving an ice cream, and adults too continue to experience enthusiasm related to food. In modern life, this is also reflected in consumer enthusiasm, for example among food or wine enthusiasts who engage with their passion in exploratory and knowledgeable ways (Johnson & Bastian, 2015; Moreo et al., 2022).

Although enthusiasm might share its roots with other species, it could also take on a uniquely human form. A defining feature of human cognition is the capacity for abstract thought and mental time travel. This cognitive flexibility enables people to experience enthusiasm for creative ideas, sudden insights, and imagined futures, even in the absence of immediate external stimuli. Enthusiasm thus could play a role not only in the pursuit of biologically essential outcomes but also in energizing action toward self-determined aims such as creative expression, intellectual discovery, ideological commitment, and adventurous experience. For example, the anticipation of riding a roller coaster has no immediate adaptive or survival value, yet it can elicit strong feelings of enthusiasm (Milona et al., 2024).

Beyond such externally triggered excitement, many people may also recognize that enthusiasm can emerge from within. Internally generated enthusiasm may arise when reflection, memory, and imagination converge into an emotionally charged sense of direction or insight. Such moments can evoke a sudden urge to act or share, as when Archimedes, whose story opened the introduction of this dissertation, ran into the streets exclaiming Eureka upon realizing a principle he could not keep to himself. In humans, the object of enthusiasm does not need to be immediately present, like a piece of desirable food. It can also exist in the mind's eye as a possibility or imagined scenario. When people become enthusiastic about a future prospect, this emotion may motivate them to act in the present, engaging in behaviors or planning activities that increase the likelihood of realizing that prospect. Likewise, recalling moments of past enthusiasm can reactivate similar feelings, and re-experiencing enthusiasm may encourage individuals to seek out comparable experiences again. Thus, beyond being pleasurable, reliving past enthusiasm may also serve a functional purpose.

While enthusiasm may support individual goal pursuit, it can also serve as a social catalyst, energizing collective endeavors and reinforcing shared bonds. Possible evolutionary roots of enthusiasm can help explain why it so readily takes on social forms in human life. Expressive displays of enthusiasm, such as animated gestures, elevated tone of voice, and shared excitement, may originally have served to capture attention and align group action (Miller, 2000). In modern society, such signaling patterns may still be visible when teammates cheer each other on, when concert audiences move in unison, or when

football supporters erupt in collective joy. In fact, in our autobiographical recall experiments such events were often described as typical situations in which participants experienced enthusiasm. In each of these settings, enthusiasm continues to synchronize perception, emotion, and movement, linking individuals within a shared field of engagement. What once enabled cooperation for survival might now connect people through collective meaning and communal experience. Understanding this possible continuity between biological and social functions provides a foundation for examining how enthusiasm operates in modern collective life, as explored in the following section.

The social dimension of enthusiasm

One of the earliest explorations of enthusiasm already emphasized its inherently social nature. In Plato's dialogue Ion, Socrates compares the enthusiastic performer of poetry to a magnetic chain: the divine inspiration (the Muse) enters the poet, who then transmits this energy to others (Verhoeven, 1972). In this view, enthusiasm was not merely a private experience but a communicative force, intended to pass on meaning and emotion from one person to another. Well over two millennia later, Durkheim (1912/2015) provided a sociological description of a similar phenomenon in his concept of collective effervescence, which describes how emotionally charged group experiences (what we might today call shared enthusiasm) promote social unity and strengthen group bonds. Such collective expressions likely played a critical role in early human societies by reinforcing cooperation, shared identity, and cultural cohesion. Although these early accounts of enthusiasm, both philosophical and sociological, recognized its social dimension, more recent definitions and scientific descriptions have largely overlooked this aspect. In contemporary psychological research, enthusiasm is typically conceptualized as an individual emotion characterized by high arousal and positive valence, focusing primarily on personal motivation and affective experience.

The empirical chapters in this dissertation have demonstrated that the social element is a fundamental component of enthusiasm. Across studies, enthusiasm consistently emerged as an emotion characterized by an interpersonal orientation. In the prototype analysis presented in Chapter 2, features such as "bursting with" or the urge to express and share were identified as central to the concept. When people feel enthusiastic,

they want to talk about their experience and share it with others. The same analysis also revealed that honesty and kindness were among the most typical features, further underscoring the inherently social nature of enthusiasm. This interpersonal dimension was corroborated in Chapter 3, where the emotional profile of enthusiasm included a strong urge to share one's feelings with someone.

Enthusiasm is not only experienced within a social context but also shaped by it. In the prototype analysis, several central features reflected this contextual dimension. For example, good atmosphere appeared as an exemplar of the core feature Good Feeling, and the element Free (Uninhibited) also emerged as central. Evidence for the influence of social context was also found in the appraisal study, where participants indicated that they perceived the situation that sparked enthusiasm as a safe environment in which they could express their feelings. This pattern was further supported in Chapter 4, which showed that social context significantly shapes both the experience and the expression of enthusiasm.

These findings hold significant theoretical implications. If enthusiasm is both intrinsically social and interpersonally contagious, it may play a central role in explaining how collective motivation and coordinated action emerge. This perspective suggests that enthusiasm can serve as a driving force behind social movements and collaboration, transforming individual intentions into collective momentum. Despite its potential importance, enthusiasm as a catalyst of collective behavior has received relatively little attention in mainstream emotion theory. Recognizing the collective power of enthusiasm provides new opportunities for understanding the affective foundations of teamwork and organizational engagement, as well as the dynamics of political mobilization, mass gatherings, and social change. At the same time, this social and mobilizing power raises a critical question. If enthusiasm can unite and energize groups, does it always do so in a positive or constructive way?

Is enthusiasm good or bad?

Although enthusiasm is typically experienced as a positive emotion by the individual, this does not necessarily imply that the object or goal toward which it is directed is morally good. Enthusiasm, while affectively positive, is not inherently virtuous. Its moral value depends on the aims it serves and the social contexts in which it is

expressed. Enthusiasm can inspire cooperation, creativity, and social progress, but it can also legitimize conformity, fanaticism, or violence when aligned with harmful ideologies. Historical examples illustrate how enthusiasm can be harnessed for destructive purposes. The Nazi regime, for instance, systematically appropriated the symbols and rhetoric of collective enthusiasm, turning it into a political tool for mass mobilization and control (Bösel, 2008; Kershaw, 2001).

Aristotle's concept of ethos provides an early framework for understanding this moral complexity. He argued that emotional expression acquires moral and persuasive legitimacy only when it is grounded in ethical character and directed toward virtuous ends. In his broader framework of ethos, pathos, and logos, moral action emerges when emotion is moderated by reason and guided by concern for the common good. Applied to enthusiasm, this suggests that its moral value lies not in its intensity but in its alignment with wisdom and integrity. When guided by ethos, enthusiasm becomes a constructive force that inspires noble action. When detached from such ethical grounding, however, it risks devolving into mere passion or collective fervor devoid of moral direction. People, of course, differ in their understanding of what is moral or not. In a world increasingly polarized by political and ideological divisions, enthusiasm is often found on both sides of a debate. This is not so different to earlier centuries, when thinkers such as Henry More, John Locke, and David Hume warned against what they saw as the delusions of religious fanaticism in its opponents, as discussed previously in the introduction. When enthusiasm is directed solely toward self-interest or the interests of one's own group, it can become a dangerous force that fuels conflict, division, and even war.

This perspective is also relevant to contemporary debates about the moral and cultural role of enthusiasm. As discussed in the introduction, several philosophers have expressed concern about the role of enthusiasm in contemporary culture (Han, 2015; Simon, 2014; Verhoeven, 1972). Their critiques focus on how social and economic systems can distort the emotion's original vitality. In the context of late modernity, enthusiasm is often no longer seen as an authentic expression of inner conviction but as a social expectation tied to performance, productivity, and market value. Today, these cultural dynamics are increasingly amplified by digital technology. Algorithms, social

media platforms, and interactive design features are deliberately structured to capture and sustain our excitement. When the enthusiasm switch remains constantly on, balance is lost.

In sum, enthusiasm is neither inherently good nor bad. It is a powerful human emotion whose effects depend on the intentions and contexts in which it is evoked. History shows how it can unite or divide, inspire solidarity or fuel hostility. In commerce, enthusiasm is frequently cultivated to capture attention and drive profit, sometimes undermining genuine engagement or well-being. At the same time, it can also be harnessed for constructive purposes, such as promoting healthy behavior, encouraging learning, or supporting personal growth. Like any powerful instrument, it demands care, reflection, and ethical awareness in its use.

Practical implications: Applying insights on enthusiasm

When directed toward virtuous ends, enthusiasm can have positive and far-reaching effects. As discussed in the introduction, it enhances motivation, learning, and cooperation across diverse domains. In education, teachers' authentic enthusiasm enhances students' motivation and achievement while supporting teachers' own engagement and well-being (Keller et al., 2014; Patrick et al., 2000; Taxer & Frenzel, 2018; Valentín et al., 2022). In organizations, leader enthusiasm strengthens perceptions of charisma, encourages cooperation, and enhances commitment among followers (Bono & Ilies, 2006; Damen et al., 2008; Rego et al., 2009). Beyond schools and workplaces, enthusiasm also drives consumer and civic engagement. Enthusiastic customers demonstrate greater loyalty and more positive brand attitudes (Moreo et al., 2022; So et al., 2014), while in politics, enthusiasm mobilizes citizens to participate and engage in public debate (Brader, 2005; Marcus & MacKuen, 1993; Valentino et al., 2011). These studies demonstrate that enthusiasm can have a meaningful impact across multiple domains. The insights derived from this dissertation extend this understanding by clarifying the mechanisms through which enthusiasm operates and by offering guidance on how it can be applied responsibly and effectively in practice.

As shown in the empirical chapters, enthusiasm often functions as a motivating and activating emotion. It energizes behavior, directs attention, and sustains persistence in goal-oriented activity. This activating quality distinguishes enthusiasm from more passive

or self-reflective positive states. Whereas joy reflects satisfaction with achieved goals and hope involves anticipation of uncertain outcomes, enthusiasm arises when goals are attainable and action feels both possible and desirable. Therefore, in both educational and organizational settings, intentionally nurturing enthusiasm can enhance performance and vitality. This may be achieved by recognizing and acknowledging moments of enthusiasm, creating opportunities to reflect on them, and encouraging their open expression.

Authenticity plays a central role in these processes. As demonstrated in the prototype analysis of Chapter 2, Honest (Sincere, Authentic, Real, Fair) emerged as a defining feature of enthusiasm. Research indicates that enthusiasm is most effective when it is genuinely felt and expressed, as authentic displays enhance charisma, competence, and performance, whereas inauthentic expressions can undermine motivation and well-being (Bono & Ilies, 2006; Keller et al., 2014; Taxer & Frenzel, 2018; Totterdell & Holman, 2003). For those in leadership roles, whether as teachers, executives, or politicians, maintaining awareness of what genuinely inspires them and sustaining that connection over time is relevant for both effectiveness and personal well-being. Leaders can further play an important role in recognizing and nurturing enthusiasm in others, while helping them understand the value of connecting with their own authentic sources of energy. Professional development programs for leaders and other professionals could therefore benefit from explicitly addressing the role of enthusiasm, how to maintain it, express it authentically, and use it to inspire others.

Across our studies, enthusiasm emerged not only as an individual emotion but also as an interpersonal phenomenon. The prototype analysis presented in Chapter 2 showed that enthusiasm is frequently described in social terms, including qualities such as honest, kind, and bursting with energy, with exemplars such as sharing and talking about it. Chapter 3 further supported this perspective, showing that enthusiasm tends to arise in situations perceived as socially safe and is accompanied by a strong desire to share one's feelings with others. Chapter 4 extended this understanding by demonstrating that the experience and expression of enthusiasm are shaped by contextual and cultural norms. For organizations it may be beneficial to recognize and make use of this collective potential. Creating psychologically safe environments enables enthusiasm to be expressed more freely and shared more effectively. One finding that deserves particular attention is

that enthusiasm was considered more appropriate at work but was reported less frequently than in private life. This pattern suggests that organizational expectations may sometimes encourage inauthentic expressions of enthusiasm. Although such displays may occasionally serve a functional purpose, sustaining them for too long can undermine both performance and well-being. Organizations may therefore benefit from paying explicit attention to authentic enthusiasm, not only by recognizing its value but also by creating conditions in which it can be expressed naturally. In doing so, organizations can help bridge the gap between experienced and expected enthusiasm, thereby contributing to healthier, more engaging, and sustainable work environments.

Conclusion

The findings presented in this dissertation collectively demonstrate that enthusiasm is a distinct, multidimensional, and socially embedded emotion that plays an important role in human motivation and interaction. Across the prototype, appraisal, and cross-cultural studies, enthusiasm emerged as a positive, high-energy state that connects affective experience, goal-directed action, and interpersonal expression. It bridges the gap between cognition and behavior, transforming interest into engagement and inspiration into action. Although enthusiasm is universally valued, its expression and experience are context-dependent, shaped by social norms and cultural expectations.

The theoretical and practical analyses further indicate that enthusiasm serves adaptive functions at both individual and collective levels. It activates behavior, stimulates learning, enhances leadership and cooperation, and can ignite social movements. At the same time, enthusiasm becomes less effective and may lead to emotional exhaustion when it is not authentic. A deeper understanding of the structure, function, and social regulation of enthusiasm, together with recognition of its benefits, can enable educators, leaders, and policymakers to apply enthusiasm in ways that promote authentic engagement, psychological health, and sustainable performance.

Summary

Enthusiasm is an emotion that is frequently mentioned and recognized in everyday life. At the same time, enthusiasm has received relatively little systematic attention in scientific research. Compared with negative emotions and several other positive emotions, relatively little is known about what enthusiasm precisely is, how it operates, and which role it plays in social interaction. The aim of this dissertation is to reduce this gap by studying enthusiasm as a psychological construct with its own structure, function, and social regulation.

Chapter 1: Introduction

The introduction outlines that enthusiasm has historically occupied an ambivalent position. In ancient Greece, it was viewed as a form of divine inspiration. Later, it became distrusted because of its presumed tendency toward exaggeration, fanaticism, and loss of reason. During the Romantic period, it regained appreciation as a source of creativity and vitality. In modern times, enthusiasm is regarded on the one hand as a driver of motivation and performance, but on the other hand it is criticized when deployed as a social obligation or as an instrument of manipulation.

Although research on enthusiasm is limited, empirical work has demonstrated its importance across diverse domains, including education, consumer behavior, and political psychology. This research indicates that enthusiasm is associated with motivation, persistence, influence, and performance. At the same time, this body of work is fragmented, relies on varying definitions and measurement instruments, and typically focuses on specific applications or contexts. As a result, there is no coherent understanding of what enthusiasm precisely entails, how it relates to other positive emotions, and how its experience varies across social contexts and cultural norms. This lack of conceptual and empirical integration provided the starting point for the systematic scientific investigation presented in this dissertation.

The empirical part of the dissertation consists of three chapters, in which enthusiasm is examined from complementary perspectives. First, the internal structure of enthusiasm was investigated using a prototype analysis. Second, the cognitive appraisals and response types associated with enthusiasm were examined, as well as how these patterns compare with the related positive emotions joy and hope. Third, the experience of enthusiasm and its perceived appropriateness were studied across different social contexts and cultures.

Chapter 2: The internal structure of enthusiasm

Chapter 2 examines the meaning that people attribute to enthusiasm in everyday life. Although enthusiasm is widely used in both everyday and scientific contexts, there is little agreement about the characteristics that define this emotion. To clarify this issue, a prototype analysis was conducted. This method examines whether people perceive enthusiasm as a coherent emotional concept and which features they regard as defining. The prototype analysis consisted of five studies. In the first study, participants freely generated characteristics, associations, and descriptions that they associated with enthusiasm. This open-ended inventory yielded a large number of distinct descriptions. In a subsequent step, these descriptions were aggregated and organized by independent coders into 28 overarching features of enthusiasm. In the following studies, the cognitive accessibility of these features was examined. Multiple methods were employed, including free recall, recognition, classification speed, and autobiographical memory tasks.

The results indicate that enthusiasm has a clear prototypical structure, with both central and peripheral features. The central features of enthusiasm include a positive feeling, a high level of energy, goal directedness, and a clear social orientation. Enthusiasm is not only experienced as an internal state but is often accompanied by a desire to express and share feelings with others. Characteristics such as honest, sincere, friendly, and bursting with energy were considered typical of enthusiasm by participants. Other characteristics, such as busy, uninformed, and naive, were also mentioned but were found to be less central. These findings indicate that enthusiasm cannot be reduced to mere excitement or pleasure. Rather, it should be understood as a coherent and socially

embedded emotional concept. This social element has thus far been largely absent from most definitions and theories of emotion.

Chapter 3: Appraisal patterns and response types of enthusiasm

Chapter 3 examines the extent to which enthusiasm can be distinguished from related positive emotions, in particular joy and hope. This is addressed within the framework of appraisal theory, which assumes that emotions differ in the ways situations are evaluated and in the responses they elicit. In two studies, participants described autobiographical experiences of enthusiasm, joy, or hope. The first study focused on cognitive appraisal patterns of the situation, such as goal relevance, perceived control, and uncertainty. The second study examined the associated response types, including feelings, thoughts, and behaviors. The results indicate that enthusiasm has a distinct profile. Enthusiasm arises primarily in pleasant and intense situations in which desired goals are perceived as attainable.

Compared with joy, enthusiasm is less focused on enjoying a goal that has already been achieved and more centered on the energized anticipation that a goal is within reach. Compared with hope, enthusiasm is characterized by a stronger sense of control, lower uncertainty, and a greater willingness to take risks. Enthusiasm promotes immediate action, often without extensive consideration of potential negative outcomes. With respect to response types, enthusiasm appears to be the most action oriented of the three emotions. This combination of intensity, goal directedness, and readiness to act supports the conclusion that enthusiasm is not merely a variant of joy or hope, but a positive emotion with a clearly distinct profile.

Chapter 4: Social norms and the experience of enthusiasm

Chapter 4 examines the relation between perceived social norms and the experience of enthusiasm. Although enthusiasm is often described as an expressive and contagious emotion, little is known about the role of perceived appropriateness and contextual factors. Drawing on a large-scale survey conducted in 51 societies, including a total of 12,851 participants, this chapter investigates how frequently people experience enthusiasm and how appropriate they consider it to express enthusiasm in three contexts:

private, work, and public settings. Cultural differences were also examined, operationalized in terms of individualism-collectivism and power distance.

The results indicate that people experience enthusiasm more frequently in situations in which they also perceive it as appropriate to express this emotion. This association is strongest in public contexts and weakest in private contexts, suggesting that perceptions of appropriateness play a greater role in public settings than in the private sphere. Notably, enthusiasm is considered most appropriate in work contexts, whereas it is experienced most frequently in private situations. This pattern suggests that enthusiasm at work may partly reflect social expectations rather than purely authentic experience.

Cultural differences were also examined, with specific attention to individualism-collectivism and power distance. Although these cultural dimensions were not clearly associated with perceived appropriateness of enthusiasm, they were related to the reported level of experienced enthusiasm. Collectivistic societies reported higher levels of enthusiasm in private and work contexts, and societies characterized by greater power distance reported higher levels of enthusiasm across all contexts. These findings indicate that enthusiasm is not merely an individual emotion, but is closely embedded in social norms, contexts, and culture.

Chapter 5: Discussion

Taken together, the findings of this dissertation indicate that enthusiasm is a positive, energetic, and goal directed emotion with a clear social component. It arises when a desired outcome is perceived as attainable and promotes active engagement and visible expression, particularly in social situations that are experienced as safe and supportive. Enthusiasm integrates feeling, cognition, and action, and is sensitive to contextual factors. These insights have implications for education, organizations, leadership, consumer behavior, and politics. Enthusiasm can enhance performance, learning, and engagement, provided that it is authentic and allowed to emerge in a natural manner. At the same time, this dissertation cautions against imposed or instrumental forms of enthusiasm, which may over time lead to exhaustion and alienation. By understanding enthusiasm in terms of its structure, function, and social regulation, professionals and policymakers can make more

informed decisions about how this powerful emotion can be applied in a responsible and sustainable way.

Samenvatting

Enthousiasme is een emotie die in het dagelijks leven vaak wordt genoemd en herkend. Tegelijkertijd is enthousiasme in de wetenschap weinig systematisch onderzocht. In vergelijking met negatieve emoties en sommige andere positieve emoties, is er relatief weinig bekend over wat enthousiasme precies is, hoe het werkt en welke rol het speelt in sociale interacties. Dit proefschrift heeft tot doel om dit hiaat te verkleinen door enthousiasme te bestuderen als een psychologisch construct met een eigen structuur, functie en sociale regulatie. In de inleiding wordt geschetst dat enthousiasme historisch gezien een ambivalente positie inneemt.

Hoofdstuk 1: Introductie

In het oude Griekenland werd het gezien als een vorm van goddelijke bezieling, later werd het gewantrouwd vanwege de vermeende neiging tot overdrijving, fanatisme en verlies van rede, en in de Romantiek kreeg het opnieuw waardering als bron van creativiteit en vitaliteit. In de moderne tijd wordt enthousiasme enerzijds gezien als een motor voor motivatie en prestaties, maar anderzijds ook bekritiseerd wanneer het wordt ingezet als sociale verplichting of als instrument voor manipulatie.

Hoewel onderzoek naar enthousiasme beperkt is, bestaat er inmiddels wel empirisch werk dat het belang ervan aantoont in uiteenlopende domeinen, zoals onderwijs, consumentengedrag en politieke psychologie. Dit onderzoek laat zien dat enthousiasme samenhangt met motivatie, volharding, invloed en prestatie. Tegelijkertijd is dit werk sterk versnipperd, hanteert het uiteenlopende definities en meetinstrumenten, en richt het zich meestal op specifieke toepassingen of contexten. Daardoor ontbreekt een samenhangend begrip van wat enthousiasme precies is, hoe het zich verhoudt tot verwante positieve emoties, en hoe de ervaring van enthousiasme varieert tussen sociale contexten en culturele normen. Dit gebrek aan conceptuele en empirische samenhang vormde de aanleiding voor het systematisch wetenschappelijk onderzoek in dit proefschrift.

Het empirische deel van het proefschrift bestaat uit drie hoofdstukken, waarin enthousiasme vanuit verschillende, elkaar aanvullende perspectieven wordt onderzocht. Ten eerste werd de interne structuur van enthousiasme onderzocht met behulp van een prototype-analyse. Ten tweede werd gekeken naar de cognitieve beoordelingen (appraisals) en reactievormen (response types) van enthousiasme, en ook naar hoe deze zich verhouden tot de verwante positieve emoties vreugde (joy) en hoop (hope). Ten derde werd onderzocht hoe enthousiasme wordt ervaren en hoe gepast het wordt gevonden in verschillende sociale contexten en culturen.

Hoofdstuk 2: De interne structuur van enthousiasme

In hoofdstuk 2 wordt onderzocht welke betekenis mensen in het dagelijks leven aan enthousiasme toekennen. Hoewel enthousiasme veel wordt gebruikt in zowel alledaagse als wetenschappelijke contexten, bestaat er weinig overeenstemming over de kenmerken die deze emotie definiëren. Om dit te verhelderen is gebruikgemaakt van een prototype-analyse, een methode die onderzoekt of mensen enthousiasme zien als een samenhangend emotioneel begrip en welke kenmerken zij als bepalend ervaren.

De prototype-analyse bestond uit vijf studies. In de eerste studie noemden deelnemers vrijuit eigenschappen, associaties en beschrijvingen die zij met enthousiasme verbonden. Deze open inventarisatie leverde een groot aantal afzonderlijke beschrijvingen op. In een volgende stap werden deze beschrijvingen door onafhankelijke beoordelaars samengebracht en geordend tot 28 overkoepelende kenmerken van enthousiasme. In de daaropvolgende studies werd onderzocht in hoeverre deze kenmerken cognitief toegankelijk waren. Daarbij werd gebruikgemaakt van verschillende methoden, waaronder vrije herinnering, herkenning, classificatiesnelheid en autobiografische herinneringstaken.

De resultaten laten zien dat enthousiasme een duidelijke prototypische structuur heeft, met zowel centrale als perifere kenmerken. De centrale kenmerken van enthousiasme zijn een positief gevoel, een hoge mate van energie, gerichtheid op doelen en een duidelijke sociale oriëntatie. Enthousiasme wordt daarbij niet alleen ervaren als een innerlijke toestand, maar gaat vaak gepaard met de behoefte om gevoelens te uiten en te delen met anderen. Kenmerken als “eerlijk”, “oprecht”, “vriendelijk” en “bruisend van energie” werden door deelnemers als typisch voor enthousiasme beschouwd. Andere kenmerken,

zoals “druk”, “onwetend” en “naïef”, werden eveneens genoemd, maar bleken minder centraal. Deze bevindingen laten zien dat enthousiasme niet kan worden teruggebracht tot louter opwinding of plezier, maar moet worden begrepen als een samenhangend en sociaal ingebed emotieconcept. Dit sociale element is tot op heden in de meeste definities en theorieën over emoties nauwelijks expliciet meegenomen.

Hoofdstuk 3: Cognitieve beoordelingen en reactievormen van enthousiasme

In hoofdstuk 3 wordt onderzocht in hoeverre enthousiasme zich onderscheidt van verwante positieve emoties, in het bijzonder vreugde (joy) en hoop (hope). Dit gebeurt aan de hand van appraisaltheorie, die ervan uitgaat dat emoties verschillen in de manier waarop situaties worden beoordeeld en in de reacties die zij oproepen. In twee studies beschreven deelnemers autobiografische ervaringen van enthousiasme, vreugde of hoop. In de eerste studie lag de focus op cognitieve beoordelingen van de situatie, zoals doelgerichtheid, controle en onzekerheid. In de tweede studie werd gekeken naar de bijbehorende reactievormen, waaronder gevoelens, gedachten en gedragingen. De resultaten laten zien dat enthousiasme een duidelijk eigen profiel heeft. Enthousiasme ontstaat vooral in prettige en intense situaties waarin gewenste doelen als haalbaar worden gezien.

In vergelijking met vreugde draait enthousiasme minder om het genieten van een bereikt doel en meer om de energieke verwachting dat een doel binnen handbereik ligt. In vergelijking met hoop wordt enthousiasme gekenmerkt door een sterker gevoel van controle, minder onzekerheid en een grotere bereidheid om risico’s te nemen. Enthousiasme zet aan tot direct handelen, vaak zonder uitgebreid stil te staan bij mogelijke negatieve uitkomsten. Wat reactievormen betreft blijkt enthousiasme de meest actiegerichte van de drie emoties. Deze combinatie van intensiteit, doelgerichtheid en handelingsbereidheid ondersteunt de conclusie dat enthousiasme niet slechts een variant is van vreugde of hoop, maar een positieve emotie met een duidelijk eigen profiel.

Hoofdstuk 4: Sociale normen en de ervaring van enthousiasme

Hoofdstuk 4 onderzoekt de relatie tussen waargenomen sociale normen en de ervaring van enthousiasme. Hoewel enthousiasme vaak wordt gezien als een expressieve

en besmettelijke emotie, is weinig bekend over de rol van gepastheid en context. Op basis van een grootschalige survey in 51 samenlevingen, met in totaal 12.851 deelnemers, werd onderzocht hoe vaak mensen enthousiasme ervaren en hoe passend zij het vinden om enthousiasme te tonen in drie contexten: privé, werk en publiek. Daarnaast werd gekeken naar culturele verschillen, gemeten aan de hand van individualisme-collectivisme en machtsafstand. De resultaten laten zien dat mensen vaker enthousiasme ervaren in situaties waarin zij het ook passend vinden om deze emotie te tonen. Deze samenhang is het sterkst in publieke contexten en het zwakst in privésituaties, wat erop wijst dat opvattingen over gepastheid een grotere rol spelen in het openbaar dan in de privésfeer. Opvallend is dat enthousiasme op het werk als het meest passend wordt gezien, terwijl het in privésituaties het vaakst wordt ervaren. Dit suggereert dat enthousiasme op het werk deels kan samenhangen met sociale verwachtingen, en niet altijd met oprechte beleving.

Ook culturele verschillen zijn onderzocht, met aandacht voor individualisme-collectivisme en machtsafstand. Hoewel deze dimensies geen duidelijke samenhang vertoonden met de ervaren gepastheid van enthousiasme, hingen zij wel samen met de ervaren mate ervan. Collectivistische samenlevingen rapporteerden meer enthousiasme in privé- en werksituaties, en samenlevingen met een grotere machtsafstand rapporteerden meer enthousiasme in alle contexten. Deze bevindingen geven aan dat enthousiasme niet louter een individuele emotie is, maar nauw verbonden is met sociale normen, contexten en cultuur.

Hoofdstuk 5: Discussie

Gezamenlijk laten de bevindingen in dit proefschrift zien dat enthousiasme een unieke positieve, energieke en doelgerichte emotie is met een duidelijke sociale component. Het ontstaat wanneer een gewenste uitkomst als haalbaar wordt gezien en zet aan tot actieve betrokkenheid en zichtbare expressie, vooral in sociale situaties die als veilig en ontvankelijk worden ervaren. Enthousiasme verbindt gevoel, denken en handelen en is contextgevoelig. Deze inzichten hebben implicaties voor onderwijs, organisaties, leiderschap, consumentengedrag en politiek. Enthousiasme kan prestaties, leren en betrokkenheid versterken, mits het oprecht is en ruimte krijgt om op een natuurlijke manier te ontstaan. Tegelijkertijd waarschuwt dit proefschrift voor het risico van opgelegd of

instrumenteel enthousiasme, dat op termijn juist kan leiden tot uitputting en vervreemding. Door enthousiasme te begrijpen in zijn structuur, functie en sociale regulatie, kunnen professionals en beleidsmakers beter afwegen hoe deze krachtige emotie op een verantwoorde en duurzame manier kan worden ingezet.

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Curriculum Vitae

Rijn Vogelaar was born in 1969 in Steenbergen, the Netherlands. After completing his pre-university education at Moller Lyceum in Bergen op Zoom, he studied at the University of Amsterdam, where he obtained a master's degree in social psychology and Psychological Methodology in 1994. As part of his academic training, he spent six months at the University of Leeds in the United Kingdom, where he conducted research on decision making. After graduation, he fulfilled his military service as a Navy Officer and applied researcher at the Social Sciences Department of the Royal Netherlands Navy. He subsequently worked at the Department of Behavioral Sciences of the Royal Netherlands Armed Forces and later as a labour market researcher and policy advisor at the Dutch Ministry of Defence.

From 2000 to 2013, he was affiliated with Blauw Research, where he held various research and managerial positions and served as Chief Executive Officer from 2006 onward. In this role, he combined strategic leadership with the supervision and development of research professionals. During this period, he conducted applied research in the field of customer enthusiasm and organizational engagement. He also authored his first book on enthusiasm, The Superpromoter (2011), which was based on this line of applied research. After leaving Blauw Research, he founded his own consultancy firm, The Superpromoter Academy, through which he provides keynote lectures, executive coaching, and advisory services related to customer and employee enthusiasm.
From 2020 to May 2024, he also worked as Research Director at Yorizon, where he supervised researchers and data analysts and guided research projects focused on digital well-being and organizational functioning. He has authored several books on enthusiasm and positive organizational dynamics. These professional activities laid the foundation for the academic research presented in this dissertation.

The PhD research was conducted at the Institute of Psychology, Faculty of Social and Behavioural Sciences, Leiden University, within the section of Social, Economic and Organisational Psychology. During his doctoral trajectory at Leiden University, he

completed the mandatory courses Leiden University PhD Introductory Meeting, Scientific Integrity, and Data Management. Given his more than twenty years of professional research experience, no additional formal training within the doctoral training programme was required beyond the mandatory components.

This dissertation investigates enthusiasm as a distinct psychological emotion with its own structure, function, and social regulation. Although widely recognized in everyday life and frequently discussed by philosophers throughout history, enthusiasm has received little systematic attention in psychological research. The dissertation first situates enthusiasm within its historical and philosophical context, before examining the concept through three empirical studies.

A prototype analysis shows that enthusiasm has a coherent internal structure characterized by positive affect, high energy, goal directedness, and interpersonal contact. Appraisal and response type research demonstrates that enthusiasm differs from related emotions such as joy and hope by its strong action orientation and the perception that desired goals are attainable. A large cross-cultural survey across 51 societies examines how frequently people experience enthusiasm and how appropriate they consider it to express enthusiasm in private, work, and public contexts, and how these patterns vary across cultures. The final chapter integrates these findings, proposes a working definition of enthusiasm, discusses its role within contemporary emotion theory, examines its social and motivational functions, reflects on its moral ambivalence, and outlines practical implications for domains such as education, organizations, leadership, consumer behavior, and politics.

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