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Emotions and Concerns:

Situational Evidence for their Systematic Co-Occurrence.

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Author's Note

Abstract

People experience emotions when events are relevant to their current concerns, that is, when events affect their goals, values, or motives, etc. that are pertinent at that time. In the current research, we focused on one kind of concerns – values – and examined whether different *types* of concerns are associated with different categories of emotion. More specifically, we investigated whether, at the situation level, the relevance of different types of values is linked to the intensity of different types of emotional experience. We conducted two retrospective survey studies (Studies 1 and 2) – one of which was cross-cultural – and one experience sampling study (Study 3). Together, the three studies provide convergent evidence for associations between the situational relevance of self-focused values (e.g., ambition, success) and socially disengaging emotions (e.g., pride, anger) on the one hand, and between the relevance of other-focused values (e.g., loyalty, helping) and socially engaging emotions (e.g., closeness, shame) on the other. These findings challenge the (often implicit) assumption of emotion theories that different types of concerns are interchangeable – i.e., that it does not matter for emotion *which* concern is relevant as long as *one* is. In contrast, the current research proposes that different concerns are constitutive elements of different emotional experiences and thus encourages new ways of thinking about emotions.

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People experience emotions when events are relevant to their *current concerns*; that is, when events are relevant to their goals, needs, motives, values, norms, attachments, beliefs, or expectations that are particularly pertinent at the time (e.g., Frijda, 1986; 2007; Lazarus, 1991; Scherer, 2005, 2013). Take two participants from a self-report study on emotions (De Leersnyder, Mesquita, & Kim, 2011), Peter and Jasmine, who both experienced positive emotions after obtaining their driver's license. Peter reported intense feelings of 'pride' and described the situation as follows:

> "A few months ago I started to study and practice for all the driver's licences
>
> you can have, such as for a motorbike, car, and truck. I was very satisfied [with
>
> myself] when I passed all the exams on my first attempt."

Jasmine reported intense feelings of 'closeness' and 'respect,' in addition to 'pride.' Her situation description was somewhat different from Peter's:

> "A little while ago, I passed my driving exam. I was very happy because it means
>
> I can finally bring my children to a mall or to the McDonald's every now and
>
> then. I can also take the car shopping, so that my family doesn't have to carry
>
> heavy groceries anymore."

Both Peter and Jasmine considered the situation of getting a driver's license 'emotional' and 'positive' because it was both relevant and conducive to a goal they had set for themselves. Yet, the situation was relevant to Peter because he had accomplished a personal goal, whereas it was relevant to Jasmine because it enabled her to help her family. Peter and Jasmine thus differed in the concerns they considered to be at stake in getting a driver's license (ambition and success vs. loyalty and helping others) – a difference we hypothesize to be linked to the difference in the emotions they experienced (pride for Peter, but pride, closeness and respect for Jasmine).

According to most current theories of emotions, differences in concerns should not matter for the types of emotions people experience; different concerns are thought to be interchangeable (e.g., Arnold, 1960; Ellsworth & Scherer, 2003; Frijda, 1986, 2007; Oatley & Johnson-Laird, 1987; Moors, Ellsworth, Scherer, & Frijda, 2013; Roseman, 2013; Scherer, 2013). The current paper, however, starts from a different conception of the link between concerns and emotions. In contrast to previous theories, we propose that different types of concerns *are* associated with different emotion categories. More specifically, we will test the hypothesis that the categories of socially disengaging emotions (e.g., pride) versus socially engaging emotions (e.g., closeness) experienced in a situation can be understood on the basis of the types of self-focused concerns (e.g., ambition) versus other-focused concerns (e.g., helping) that are at stake in that situation.

Emotions and Concerns

Concerns occupy a central position in most theories on emotion. Within componential and appraisal approaches, emotion has been defined as "an episode of...changes in the...organismic subsystems in response to the evaluation of an...event as *relevant to major concerns* of the organism" (Scherer, 2005, p. 679, italics added). Indeed, "a condition sine qua non for emotion elicitation" is that the situation is perceived as relevant to the person's concerns (Scherer, 2013, p. 151; Frijda, 1986). Therefore, the answer to the primary appraisal question of goal relevance – "Are any of my goals involved here, any of my core beliefs and values?"– should be "yes" in order to speak of an emotion (Lazarus, 1991, p. 42). More implicitly, psychological constructionist approaches have proposed that changes in core affect that can be categorized (i.e., labeled) as an emotional experience, largely result from the process of valuation that refers to an organism's 'well-being' and thus an organism's concerns (e.g., Barrett, 2006). Concerns – i.e., values, goals, and needs – are thus at the heart of many, if not all, emotion theories (e.g., Frijda, 1986; Roseman, 1991; Scherer, 2013; Stein, Hernandez, & Trabasso, 2008) as "concerns are what render events and objects emotionally relevant in the first place" (Frijda, 2008, p.77).

Yet, emotion theories tend to differ in their view of *different types of concerns* as being a constitutive element of *different categories of emotions*. Indeed, whereas the best-known emotion theories treat different concerns as interchangeable with respect to the experience of emotion, there are some rather specific emotion theories that have proposed one-to-one relationships between certain emotions and certain concerns. Below, we will review these different perspectives in more detail, as well as outline our own view of the link between concerns and emotions, which we will then empirically test in the current research.

Different Concerns are Interchangeable

Most emotion theories, and appraisal theories in particular, have treated different concerns as interchangeable (for a similar observation, see Nelissen, Dijker, & De Vries, 2007; Scherer, 1988). In fact, most appraisal theories of emotion contend that differences in people's current concerns should not matter for the types of emotions they experience: "Different emotions are evoked by different constellations [of appraisals] and not by different […] sorts of concern" (Frijda, 1986, p. 278; see more implicitly in the theories of Arnold, 1960; Oatley & Johnson-Laird, 1987; Moors, Ellsworth, Scherer, & Frijda, 2013; Ortony, Clore, & Collins, 1988; Roseman, 2013; Scherer, 2013). Thus, although most appraisal theories assume that an appraisal of 'concern relevance' is a prerequisite for emotional experience (see above), they simultaneously assume that it does not matter *which* concerns are at stake to differentiate between different emotions. Rather, they submit that emotional experience can be captured by the outcomes of a limited set of 'concern-agnostic' appraisal dimensions that i) do not refer to any specific concern and ii) are relevant in capturing the experience regardless of which concern is at stake.

In fact, there is quite some consensus among appraisal scholars that to adequately distinguish between different emotional experiences, we need to know a person's stance on core appraisal dimensions such as i) novelty; ii) intrinsic pleasantness; iii) goal relevance; iv) goal conduciveness; v) responsibility; and vi) compatibility with norms and values (Ellsworth &

Scherer, 2003; Frijda, 1986; Scherer, 2005; Scherer & Ellsworth, 2003, 2013). In addition, some theories have included additional appraisal dimensions that capture vii) whether the person reacts to the consequences of events, actions of agents, or aspects of objects (e.g., Ortony et al., 1988); viii) a person's coping potential (e.g., Lazarus, 1991; Roseman, 2013;); and ix) a person's appetitive versus aversive motivational state (e.g., Roseman, 2013; Roseman et al., 1996). Within all of these appraisal dimensions, the relationship between the (emotional) person and the (emotion eliciting) environment is captured without referring to what is exactly at stake – that is, without taking into account the person's specific needs, goals, values, etc., that make a certain event intrinsically pleasant, moral, or possible to cope with. According to these theories, the content of a person's concerns does not need to enter into the equation[i].

Although the appraisal dimensions commonly included in appraisal research have successfully captured (Ortony et al., 1988) and predicted (Scherer & Meuleman, 2013) people's emotional experiences, this set of concern-agnostic appraisals cannot account for some important variation in emotional patterns. To illustrate this point, we revisit the earlier example of Peter and Jasmine, and try to imagine how each would have completed an appraisal questionnaire regarding the situation of getting a driver's license. In doing so, it becomes clear that – despite experiencing different emotional patterns and describing the situation in different ways – Peter and Jasmine would have rated the appraisal dimensions in much the same way[ii] – a way that, according to the literature, is likely to correspond with the emotional experience of pride (e.g., Roseman, 1991; 2013). As pride (i.e. a socially disengaging emotion) was indeed reported by both Peter and Jasmine, the appraisal dimensions described above are sufficient to capture the experience of this particular emotion. However, these appraisal dimensions do not predict Jasmine's additional feelings of 'closeness' and 'respect' (i.e. socially engaging emotions), and they therefore cannot differentiate between Jasmine and Peter's overall patterns of emotional experience.

In the current paper, we submit that people's current concerns need to be taken into account if we wish to capture their full emotional experience, and thus differentiate between the experience of pride, on the one hand, and the combined experience of pride, closeness and respect, on the other. Appraisal dimensions account for some important variation in subjective emotional experience, but we suggest that a person's full emotional experience cannot be adequately captured without also considering the type of concern that is active in a given situation, and that permeates people's perspective on the situation. Hence, our expectation is that Jasmine's concern for helping her family and Peter's concern for achievement and success are associated with different patterns of emotional experience because of the interaction between concerns and appraisals. The current studies were not designed to directly compare the respective influence of appraisals and concerns on emotions (see p. 33-34 for how future research may do so). Rather, they test the basic hypothesis that different types of concerns predict different categories of emotional experience

This idea is not entirely new as both Lazarus and Scherer have explicitly discussed the possibility that the situational activation of concerns may be associated with different types of emotional experience. In Lazarus's later work (from 1991 onwards), he proposed that a number of types of ego involvement – that is, goal commitments centering on one's ego-identity or self – may influence the quality of emotional experience. Similarly, in the conclusion of an extensive, cross-cultural study on the antecedents of emotion, Scherer (1986) noted that the occurrences of joy, fear, anger, and sadness were not evenly distributed across the concerns or motives that were affected by the reported events (see also Scherer, 1988). Yet, to our knowledge, these ideas have never been specified or concretized, and have never been tested empirically, thereby leaving intact the widespread view that different types of concerns are interchangeable with respect to the experience of emotion.

A One-to-One Relationship between Emotions and Concerns

In contrast to the concern-agnostic view of most appraisal theorists, some scholars within the domains of morality and motivational psychology, have proposed the other extreme, namely a one-to-one relationship between specific concerns and specific emotions. For instance, Rozin and colleagues (Rozin, Lowery, Imada, Haidt, 1999) have argued that three different types of morality concerns – autonomy, community, and divinity – each map onto different kinds of moral emotions. According to their theory: i) anger is a reaction to the violation of autonomy concerns, such as individual rights, freedom, and justice; ii) contempt is a reaction to the violation of community concerns, such as social hierarchy, duty, and loyalty; and iii) disgust is a reaction to the violation of divinity concerns, such as sanctity, purity, and 'the natural order of things.' Studies using vignettes that represented violations of these respective moral concerns have found support for these hypothesized associations (Laham, Chopra, Lalljee, & Parkinson, 2010; Rozin et al., 1999). However, to our knowledge, there is no evidence for these associations beyond these vignette studies.

Similarly, but in the domain of motivational psychology, McClelland (1985) and Winter (1996) have proposed one-to-one relationships between power, achievement, and affiliative motives and specific emotions. In the only direct tests of this theory, Zurbriggen and Sturman (2002) asked participants to i) visualize successful power, achievement, and affiliation events, and to rate how intensely they had experienced each of 37 emotions during that event (Study 1) or ii) recall instances of intense happiness, sadness, or anger, and to describe the eliciting events, which were then coded for the dominant motivational theme. Although the results from both studies largely failed to confirm the specific one-to-one relationships hypothesized by McClelland and Winter, they yielded evidence for some more general associations between types of motives and certain emotion categories. There were positive associations between: i) experiences of love and sadness on the one hand, and affiliative motives on the other; ii) experiences of anger and power

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motives, and; iii) experiences of excitement and surprise and achievement motives. Thus, although the evidence for one-to-one relationships between a given emotion and a specific concern is mixed at best, broader categories of emotions may be linked to certain types of concerns; a consideration we took to heart in crafting our own view on the links between emotions and concerns.

Emotions and Concerns, Revisited

In the current paper, we propose that *different types of concerns are related to different categories of emotion.* More specifically, we propose a link between, on the one hand, two types of concerns that vary on the dimension of self-focus versus other-focus (e.g., Schwartz, 2006), and on the other hand, two classes of emotions that differ on the dimension of social engagement (e.g., Kitayma, Markus, & Kurokawa, 2000). Thus, we predict links between: i) socially disengaging emotions and self-focused concerns; and ii) socially engaging emotions and other-focused concerns. This prediction is compatible with a re-interpretation of the findings of Stubriggen and Zurman (2002) described above: socially disengaging emotions such as anger, excitement, or surprise are more likely to occur in situations that are characterized by self-focused concerns (i.e. power or achievement motives), and socially engaging emotions such as sadness or love, are more likely to occur in situations that are characterized by other-focused concerns (i.e. affiliative concerns). In addition, this prediction is in line with assumptions by Kitayama and colleagues (Kitayama & Markus, 1990; Kitayama, Mesquita, & Karasawa, 2006) about the differential concerns underlying socially disengaging versus socially engaging emotions – assumptions that have, to our knowledge, never been tested. Below, we describe each of these types of concerns and categories of emotions in more detail and then outline how will empirically test their possible associations.

Self-focused versus Other-focused Concerns.

The concept of (current) 'concerns' refers to those "dispositions that motivate the subject, that prompt him to go in search of given satisfactions or to avoid given confrontations," rendering

it an umbrella term for needs, motives, major plans, goals, attachments, values, norms, expectations, etc., that are *pertinent at a particular point in time* (Frijda, 1986, p. 334). Most theories on goals, needs, motivations, or values distinguish between self-focused and other-focused concerns (e.g., Baumeister & Leary, 1995; Deci & Ryan, 1991, 2000; Kagitcibasi, 1996; Keller, et al., 2006; Markus & Kitayama, 1991a; McClelland, 1985; Ryan & Deci, 2000; Schwartz, 1992). Thus, as the distinction between self-focused and other-focused concerns has been so well recognized in theories that refer to concerns, it may be an appropriate starting point to link different types of concerns to different categories of emotion.

In the present research, we adopt a situational approach to studying the links between the subjective experience of emotion and concerns, which we operationalize as 'situationally relevant values.' Although values have mostly been treated as trans-situational "guiding principles in people's lives" (e.g., Schwartz, 1992), they can also be activated and situated 'in the moment' (e.g., Maio, Pakizeh, Cheung, & Rees, 2009). Within each situation, certain values may take precedence over others and guide one's thoughts and behaviors; at that moment, values turn into 'current concerns.' For instance, someone may generally endorse achievement values as a guiding principle in her life; yet, these values may turn into current concerns of 'succeeding' or 'showing one's capacity' in certain situations (e.g., a job interview), but not in others (e.g., visiting a sick friend). Specifically, we focus here on the situational relevance of values from Schwartz's (1992) *Value Circumplex*, a widely used and cross-culturally validated model of concerns (Fontaine, Poortinga, Delbeke, & Schwartz, 2008; Schwartz et al., 2001). The value circumplex can be described by a self-focused versus other-focused dimension (Schwartz, 2006) with values that highlight individual goals falling at one end and values that promote relationships with others falling at the end (Schwartz, 2006).[iii]

Socially Disengaging versus Socially Engaging Emotions.

Within the emotion domain, 'socially disengaging' and 'socially engaging' emotions constitute two different categories of emotion that map onto different ends of a dimension within 'emotional space.' Extensive research by Kitayama and colleagues has provided evidence for a 'social engagement dimension' of emotion. (Kitayama & Markus, 1990; Kitayama, et al., 2000; Kitayama, Markus & Negishi, 1989 as cited in Markus & Kitayama, 1991b; Kitayama, Mesquita, & Karasawa, 2006).[iv] The *socially disengaging* end of the dimension represents feelings of pride and excitement, but also feelings of anger and irritation as these emotions separate the self from others (Kitayama et al., 2000)*;* they have also been referred to as ego-focused (Markus & Kitayama, 1991a), and autonomy-promoting (De Leersnyder, Kim, & Mesquita, 2015) emotions. The other end of the social engagement dimension, i.e. the *socially engaging* end, represents friendly feelings and feelings of closeness, but also shame and indebtedness as emotions connect the self with others (Kityama, Markus, & Kurokawa, 2000; Markus & Kitayama, 1991a, 1994); they have also been referred to as other-focused (Markus & Kitayama, 1991a), or relatedness-promoting (De Leersnyder, et al., 2015) emotions[v].

The implication might be that socially disengaging and socially engaging emotions differ from each other in terms of their underlying goals and concerns. Socially disengaging emotions may be thought to be about the goal of achieving what is best for an individual him- or herself; socially engaging emotions may be thought to be about achieving what is best for the relationship with others (Kitayama & Markus, 1990; Kitayama, Mesquita, & Karasawa, 2006). However, to date, there is no empirical evidence to support these speculations because studies on socially disengaging versus socially engaging emotions have never measured self-focused versus other-focused concerns explicitly.

Overview of the Current Series of Studies

The current research will fill this gap by empirically testing whether the *situational relevance* of self-focused versus other-focused concerns is systematically linked to the experience of socially disengaging versus socially engaging emotions, respectively. Thus, thinking about the earlier example, we will test whether the differences between the emotions reported by Jasmine and Peter can be understood from differences in the concerns that were salient when they obtained their driver's license. If we were to establish specific links between certain categories of emotions and certain types of concerns, this would challenge current theories that regard emotion-related concerns as interchangeable. In that case, concerns would play a much more important role in shaping experiences than acknowledged before and should be considered a constitutive factor of emotional experience.

Concretely, and operationalizing concerns as situationally relevant values, we expect that: i) the experience of socially disengaging emotions, such as pride or anger, is more likely and more intense in situations that people perceive as relevant to values such as 'ambition,' 'success,' 'being independent,' and 'setting your own goals' (i.e., values from the Achievement and Self-direction value-domains that map onto the self-focused end of the dimension), and; ii) that the experience of socially engaging emotions, such as closeness or shame, is more likely or more intense in situations that are perceived to be relevant to values such as 'loyalty,' 'helping others,' and 'acting according to tradition' or 'religion' (i.e., values from the Benevolence and Tradition/Conformity value-domains that map onto the other-focused end of the dimension).

We tested this hypothesis in two retrospective survey studies (Studies 1 and 2) and in an experience sampling study (Study 3). Moreover, whereas all of our studies include Belgian college students as participants, Study 2 also included a Turkish sample. This study tested whether our hypothesis about the links between situationally relevant values and emotions would hold true across different cultural contexts. The use of different methods as well as cultural groups allows

us to draw conclusions on the link between different types of emotional experience and the situational relevance of different types of concerns (i.e., values).

Study 1

Study 1 was designed to test the links between different types of emotions and the situational relevance of different types of values in two different ways. First, we tested whether the type of emotion that was *dominant* (i.e., most intense) in a situation, could be predicted by the relevance of both self-focused and other-focused concerns in that situation *(Dominance Test)*. Second, we tested whether the degree to which particular concerns are relevant in a situation predicted the *intensity* with which socially disengaging and socially engaging emotions were experienced in that situation (*Intensity Test*).

Although we generally expect that self-focused concerns are linked to socially disengaging emotions whereas other-focused concerns are linked to socially engaging emotions, we specified our predictions for the Intensity Test by valence. In fact, we expect that our hypothesis holds only/most true for types of emotion that are matched to the situation in terms of pleasantness because the valence-matched emotions are the most focal ones (i.e. in negative situations, negative emotions are most focal; for a similar approach, see Kitayama et al., 2006; Mesquita & Ellsworth, 2001). Our predictions in positive situations thus focus on the relevance of self-focused concerns for the intensity of *positive* disengaging emotions and the relevance of other-focused concerns for the intensity of *positive* engaging emotions. In contrast, in negative situations, our predictions focus on the relevance of self-focused and other-focused concerns for the intensity of negative disengaging and negative engaging emotions, respectively. We did not have any predictions for emotions that were unmatched to the valence of the situation (e.g., the *negative* disengaging and engaging emotions in *positive* situations). Finally, we explored whether the non-hypothesized associations – that are the associations between self-focused concerns and engaging emotions, and between other-focused concerns and disengaging emotions – are either negative or non-existing.

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Method

Participants. In this study, 188 Dutch-speaking Belgian college students (*M* age = 20, *SD* = 1.9, 88% female) participated.

Materials. *Emotions.* Emotions were measured with the *Emotional Patterns Questionnaire* (EPQ; De Leersnyder, Mesquita, & Kim, 2011), which was designed to cover a large range of emotional experiences. The EPQ prompts participants to describe a recently encountered situation that elicited one of four classes of emotions (positive engaging, positive disengaging, negative engaging, negative disengaging) in one of two relationship contexts (family, work/school). Furthermore, the EPQ lists the emotions expected to be most intense. An example of a prompt for negative engaging emotions in a work or school context would be "a recent occasion at school or at your work in which you felt bad about your relationships with others (e.g., feeling ashamed, guilty, indebted...)." Each participant reported one type of emotional situation (see Online Supplementary Materials for the different types of prompts). Participants were equally distributed across both the four types of emotion-prompts and the two types of relationship context.

After describing a situation that matches the prompt, participants rated their self-reported experience on a list of 20 emotion items (1 = experienced not at all − 7 = experienced extremely) that represent both valence and social engagement dimensions of emotion as established by Kitayama and colleagues (Kitayama, et al., 2000; see also De Leersnyder et al., 2011). An exploratory factor analysis explained 58% of the variance in emotion items, and yielded four factors: (1) Positive Disengaging Emotions (strong, proud, surprised); (2) Positive Engaging Emotions (close, relying on another, interested, respectful, helpful); (3) Negative Disengaging Emotions (irritated, ill feelings, upset, bored); and (4) Negative Engaging Emotions (guilty, ashamed, indebted, embarrassed). Four negative emotion terms loaded on both negative engaging and negative disengaging factors (afraid, jealous, worthless, and feeling resigned), and were therefore excluded from further analysis.

To test our hypothesis with both the dominance and intensity measures of emotion, we created one dichotomous and four continuous emotion scales. The *dichotomous emotion scale,* which we used in the Dominance Test, indicated the type of emotion that was dominant and thus *most intense* during a given situation (socially disengaging = 0; socially engaging = 1). Sixty-six situations were coded as (positively or negatively) disengaging, and 51 as (positively or negatively) engaging. The dichotomous emotion scale was coded as missing (= 9) when the difference between disengaging and engaging emotions was smaller than one scale point ($n = 71$, 37 %)[vi].

The four *continuous emotion scales* were calculated by averaging the items that loaded on the corresponding factors (Positive Disengaging, $\alpha = .74$; Positive Engaging, $\alpha = .86$; Negative Disengaging, $\alpha = .81$; Negative Engaging, $\alpha = .76$) and were used for the Intensity Test.

Values in the Emotional Situation. We developed the *Value Activation Scale* (VAS) to measure values that were active as 'current concerns' in the situation. The questionnaire asks participants to indicate which of eight values pertain to the situation. The eight values were chosen to represent the four quadrants of the Schwartz value circumplex: i) *Self-direction* was represented by the values of Independence and setting Own Goals; ii) *Achievement* consisted of Succeeding and showing Capacity; iii) *Benevolence* was represented by Loyalty to close others and Helping others; iv) *Tradition/Conformity* was represented by the items of following Traditions and acting to the Religion.[vii] A Principal Component Analysis (PCA) on these data yielded 2 factors together explaining 46% of the variance. One factor included self-focused values, and the other included other-focused values.[viii]

The Value Activation Scale asks respondents for each of the values to indicate whether the previously reported (emotional) situation was relevant. If relevant, they further indicated whether the situation met, or failed to meet, the goal states of the value (without ever mentioning the word "value"). More concretely, for each of the eight values, participants evaluated two statements that

represented the situation as being either incongruent with the value (e.g., "In this situation it was impossible for me to be loyal to the people I'm close with") or congruent with the value (e.g., "In this situation I was loyal to the people I'm close with") respectively. Participants were instructed to first read both statements and to select which alternative best captured how they felt in the emotional situation they had just described. Any time the participants indicated the value was either congruent or incongruent with the situation, we coded the value as 'relevant' (1). If they considered neither statement as applicable to the situation by ticking a box 'not applicable,' we coded the value as 'irrelevant'(0).

We created two continuous value scales that reflect the situational relevance of self-focused values and other-focused values, respectively. These variables were subsequently used in both the Dominance Test and the Intensity Test, and were constructed by averaging the four items that loaded on the corresponding self-focused and other-focused factor in the PCA. Because each item was coded as either 0 (*not relevant*) or 1 (*relevant*), the continuous value scales ranged from 0 (*none of the values were relevant*) to 1 (*all four of the values were relevant*), with intermediate scale points at .25, .50, and .75.

Procedure. The questionnaires were developed in Dutch. Respondents took part in the study on a voluntary basis during one of their classes. As this study consisted of a between-subjects design, each student completed only one version of the EPQ followed by the VAS.

Data analysis. First, we tested whether the dominance of socially disengaging versus socially engaging emotions could be predicted by the situational relevance of both self-focused and other-focused values (Dominance Test). We did so by conducting a binary logistic regression in which we predicted the dichotomous emotion variable (0 = disengaging emotions dominant; 1 = engaging emotions dominant) from the mean situational relevance of self-focused and other-focused values. As this analysis made use of the dichotomous emotion variable, it included a restricted sample of 117 situations that could be classified as either clear-cut socially disengaging

or socially engaging emotional situations. By means of a drop-in-deviance test, we estimated whether this latter model fitted the data significantly better than a model that does not include the situational relevance of values as predictors; the model's percentage of correct classifications is also reported to sketch a full picture of the results.

Second, we tested the relation between the intensity of each emotion type and the relevance in the situation of both self-focused and other-focused values, regardless of the dominant emotion type in that situation (Intensity Test), thereby making use of the continuous variables and thus including all 188 situations. For the Intensity Test we conducted four linear regression analyses (one for each emotion scale) in which we predicted the intensity of an emotion scale by the mean relevance of self-focused and other-focused values respectively, after controlling for the valence of the situation (dummy-coded as $0 = positive$ and $1 = negative$) and by also testing the interactions between Valence and the relevance of values.[ix]

Results

Dominance Test. As hypothesized, a model including the relevance of self-focused and other-focused variables fitted the data better than the 0-model (Drop in deviance $\chi^2 = 22,354$, $p \leq .001$); the percentage of correct classifications was 56% in the 0-model and 72% in the model that included values as predictors. In this model, that predicted whether engaging emotions were dominant (disengaging was the reference category), the relevance of self-focused values was negatively associated with the outcome $B = -3.457$; $SE = .911$; Wald Chi Square$_{(1)} = 14.400$; $p \leq .001$; Exp($B)= .032$; 95% CI for Exp(B) [.005, .188]) whereas the relevance of other-focused values was positively associated with the outcome ($B= 2.121$; $SE = .719$; Wald Chi Square$_{(1)} = 8.707$; $p = .003$; Exp ($B) = 8.340$95% CI for Exp [2.038, 34.120]). People are thus 8 times more likely to experience socially engaging emotions when all other-focused concerns are relevant compared to when none are relevant. In contrast – and based on the analysis performed the other way round[x] – people are 32 times more likely to experience socially disengaging emotions when

all self-focused concerns are relevant compared to when none are relevant. The results are graphically presented in Figure 1.[xi]

Intensity Test. Consistently, we found for two (out of four) types of emotion that the intensity of the emotion was associated with the matching type of values. The results are presented in Table 1. The intensity of positive engaging emotions was positively associated with the relevance of other-focused values and negatively with the relevance of self-focused values across both positive and negative situations. The intensity of negative disengaging emotions was positively associated with the relevance of self-focused values in negative situations only, thereby confirming our expectation that the associations between values and emotions would be stronger for the most focal type of emotion. The results were less clear for positive disengaging emotions and for negative engaging emotions.

Discussion

The combined results of this study provide initial support for our hypothesis that different emotional experiences can be understood on the basis of the situational relevance of different types of values. As predicted, we found that across situations, disengaging emotions are more likely to be dominant when self-focused values are more relevant, whereas engaging emotions are more likely to be dominant when other-focused values are more relevant. Consistently, the intensity of emotional experience within a situation could be predicted from the relevance of the matching type of value, although the results were only found with respect to positive engaging and negative disengaging emotions.

Study 2

Although the results of Study 1 provided initial support for our hypothesis, the study included only a limited number of emotions ($n = 20$) and value items ($n = 8$), and a relatively small number of participants from one cultural context. Study 2 was designed to replicate Study 1 while remedying these shortcomings. We expanded the scales for emotions and values, and we included

larger samples from two different cultural contexts. We selected the Turkish cultural context as a comparison to the Belgian one because previous studies have shown differences between Turkish and Northern European cultural contexts in regard to both emotions (Mesquita, 1993; 2001) and values (Phalet & Schönpflug, 2001).

Method

Participants. In this study, 263 Dutch-speaking Belgian students (83% female, mean age = 19 (SD = 1.85)) from the University of Leuven and 400 Turkish students (67.5% female, mean age = 20 (SD = 1.50)) from the Dokuz Eylül University in Izmir participated.

Materials. *Emotions.* The Emotional Patterns Questionnaire for Study 2 differed from the one in Study 1 in two ways only: it included 34 emotion items (rather than 20), and it added a Friends context to the Family and Work/school contexts used in Study 1.

To ensure structural equivalence of our measurement instruments across Belgian and Turkish samples, we conducted a Simultaneous Component Analysis (SCA; De Roover, Ceulemans, Timmerman, Vansteelandt, Stouten, & Onghena, 2012). Previous analyses had revealed problems with three items (jealous, resigned, and compassionate), which were not submitted to the SCA. In both groups, the SCA explained 63% of the variance in emotions, which is no less than the variance explained by separate Principal Component Analyses for each culture. Therefore, we adopted the factor solution yielded by the SCA. The analyses indicated no agreement on the meaning of two additional emotion items (afraid and grateful) that were thus also excluded from further analyses. For the remaining items (N = 29), the SCA yielded four common factors that corresponded to the ones intended: (1) Positive Disengaging Emotions (strong, proud about myself, surprised, relieved, joyful, euphoric, contented, hopeful); (2) Positive Engaging Emotions (interested, close, respectful, relying on another, helpful, proud about another); (3) Negative Disengaging Emotions (upset, irritable, bored, ill feelings, angry, frustrated, offended, disappointed, sad, depressed, worthless); and (4) Negative Engaging Emotions (guilty, ashamed,

indebted, embarrassed). Note that the emotion items that overlapped with those of Study 1 loaded on the same factor as they did in Study 1.

As in Study 1, we created one dichotomous and four continuous emotion scales. The *dichotomous emotion scale* indicated the type of emotions that was most intense during a given situation (socially disengaging = 0; socially engaging = 1). In the Belgian sample, 205 situations were coded as (positively or negatively) disengaging, and 188 as (positively or negatively) engaging, whereas in the Turkish sample 357 situations were coded as disengaging, and 218 as engaging. Again, the dichotomous emotion scale was coded as 'missing' (= 9) when the difference between disengaging and engaging emotions was smaller than one scale point (Belgian $n = 126$, 24% and Turkish $n = 158$, 20%)[xii].

The four *continuous emotion scales* were calculated by averaging the items that loaded on the corresponding factors (all alphas were between .80 and .94).

Values in the emotional situation. An extended version of the *Value Activation Scale* (VAS) measured values in the situation. The new version consisted of 12 (instead of 8) values, which belonged to the same four value-domains. New items were freedom (Self-Direction), ambition (Achievement), keeping your promises (Benevolence) and meeting other's expectations (Tradition/Conformity). For purposes of the current study, we were only interested in the self-versus other-focused dimension. Therefore, we do not report data on the growth-protection dimension for which we included two additional value domains in the current study.

When we performed a Simultaneous Component Analysis on these value data, all items loaded well on the 2-factor solution, except for the item 'meeting other's expectations,' which we omitted from further analyses. The common 2-factor solution of all other value items explained 35% and 43% of the variance in the Belgian and Turkish samples, respectively. The SCA explained no less variance than the separate PCA's for each culture, which is an indication that it had good fit in both cultures. The two factors clearly represented a Self-focused value factor (freedom,

independence, setting own goals, ambition, succeeding, showing capacity) and an Other-focused value factor (helping others, loyalty, keeping promise, tradition, religion).[xiii]

As in Study 1, participants indicated whether the situation was either inconsistent or consistent with each value, or whether the situation was just not relevant to the value (i.e., 'not applicable'). Based on these data, we again created two continuous value scales by averaging all items that loaded on each of the corresponding factors, respectively. Because each item was coded as either 0 (*not relevant*) or 1 (*relevant*), the continuous value scales ranged from 0 (*none of the values were relevant*), to 1 (*all of the values were relevant*).

Procedure. All respondents took part in the study on a voluntary basis during one of their classes. The questionnaires were developed in Dutch, then translated into Turkish by bilingual researchers and finally back-translated into Dutch. A team consisting of Belgian and Turkish researchers administered the questionnaires at both the Turkish and the Belgian universities. Both Belgian and Turkish students received two versions of the Emotional Patterns Questionnaires that pertained to one type of relational context (e.g., family context) and the same valence (e.g., positive), but the two versions differed in social engagement (one disengaging and one engaging prompt). Again, each Emotional Patterns Questionnaire was followed by a Value Activation Scale for that particular situation.

Data Analysis. Because every participant now reported on two emotional situations, the (two) situations were nested within participants. To account for the nested structure of the data, we used a Mixed Models procedure in SPSS. However, for the Dominance Test that used the dichotomous emotion variable and thus a restricted set of situations ($n = 968$; 77% of the total sample), the model fit of a single level 0-model (-2 Log Likelihood = 7,035) was much better than the model fit of a two-level model that nested situations within participants (-2 Log Likelihood = 2426,283). We, therefore, report the results of a single-level binary logistic regression analysis; the multi-level variant yielded a very similar pattern of results and can be found in the OSM (Table

A2.2). For the Intensity Test that made use of all 1252 situations, 0-models with a random intercept fitted the data better than single level models; hence we used multilevel linear regression analyses (Heck, Thomas, & Tabata, 2010). We conducted multilevel linear regression analyses for each type of emotion separately. We built the models in a nested way, each time adding a set of predictors, starting with the 0-Model, adding Valence or the Mean relevance of Self-focused and Other-focused values, adding both of these variables and their interactions, and ultimately adding Culture and its interactions with both Valence and the relevance of Self-focused and Other-focused values. All models included a random intercept. For ease of interpretation, we present the results of multi-level models with two separate dummy variables, one for positive situations and one for negative situations. The results are no different from those including a fixed effect for the intercept and a fixed effect for one valence dummy variable, but we chose to present the results with the dummy variables because it estimates separate simple slopes for both self-focused and other-focused values in positive versus negative situations.

Results

Dominance Test. As hypothesized, a model including the relevance of self-focused and other-focused variables fitted the data better than the 0-model (Drop in deviance $\chi^2_{(2)} = 81.588$, $p \leq .001$) and improved the percentage of correct classifications from 59% to 65%. Furthermore, a model including Culture as well the interaction terms between Culture and the relevance of self-focused values and Culture and the relevance of other-focused variables fitted the data even better than the previous model (Drop in deviance $\chi^2_{(3)} = 15.150$, $p = .002$); the percentage of correct classifications was now 67%. However, when inspecting the coefficients of the variables in this latter model, only the main effects of the relevance of self-focused and other-focused values were significant, whereas the main effect of Culture was not ($B = .881$; $SE = .583$; Wald Chi Square$_{(1)}$ = 2.320; $p = .128$), and neither were the interaction terms between Culture and self-focused values ($B = -.765$; $SE = .771$; Wald Chi Square$_{(1)} = .983$; $p = .321$) and Culture and other-focused values

(B = .664; SE =.623; Wald Chi Square$_{(1)}$ = 1.135; p = .287). Thus, across Belgian and Turkish samples, the situational relevance of self-focused and other-focused values predicts the chances of experiencing disengaging versus engaging emotions as dominant in similar ways[xiv].

As predicted, the chances of experiencing engaging emotions as dominant (disengaging was set to reference here) was negatively associated with the relevance of self-focused values (B = -2.447; SE = .449; Wald Chi Square$_{(1)}$ = 29.757; $p \leq$ .001; Exp (B) = .087; 95% CI for Exp (B) [.036 .209]) but positively with the relevance of other-focused values (B = 1.838; SE = .354; Wald Chi Square$_{(1)}$ = 27.026; $p \leq$ .001; Exp (B) = 6.286; 95% CI for Exp (B) [3.143, 12.572]). People are thus 6 times more likely to experience socially engaging emotions when all other-focused concerns are relevant compared to when none are relevant, and they are 12 times more likely to experience socially disengaging emotions when all self-focused concerns are relevant compared to when none are relevant[xv]. The results are graphically presented in Figure 2.[xvi]

Intensity Test. Consistent with our hypothesis, models including the Mean Relevance of Self-focused and Other-focused values in addition to Valence fitted the data better than models that either included Valence only, or the Relevance of Self-focused and Other-focused values only (see the OSM Tables A2.3 and A2.4 for the Drop in Deviance Tests). Furthermore, models that included Culture and its interactions on top of Valence and Values fitted the data slightly better for positive disengaging, positive engaging and negative engaging emotions. Yet Culture changed the relationship between values and emotions only in one case (out of eight; which might be due to chance) [xvii]. For ease of interpretation, we here present and describe the results of separate models for the Belgian and the Turkish students; other models can be found in the OSM (Tables A2.5 till A2.8).

In these separate models for Belgian and Turkish students, the relevance of the values was associated with the intensity of emotions in the expected ways in both cultural groups (see Table 2).[xviii] As predicted, the intensity of positive disengaging emotions was positively associated with

the situational relevance of self-focused values in both the Belgian and the Turkish sample; in both groups, this association was stronger in positive than in negative situations. Also consistent with our expectations, positive engaging emotions in the Belgian sample were positively associated with the relevance of other-focused values and negatively associated with the relevance of self-focused values in positive situations. In negative situations, the association with other-focused values was also positive, yet less strong, while an association with self-focused values was absent. In the Turkish sample, positive engaging emotions were positively associated with other-focused values in both positive and negative situations, and not related to the relevance of self-focused values in either.

The hypothesis was also borne out in regard to negative emotions. In the Belgian sample, negative disengaging emotions were positively associated with the relevance of self-focused values and negatively associated with the relevance of other-focused values in negative situations only. As expected, the relevance of self-focused values in negative situations was the only significant predictor of negative disengaging emotions in the Turkish group. Finally, the results for negative engaging emotions were also evident in the expected direction. For the Belgian students, negative engaging emotions were positively associated with other-focused values, an effect that was stronger in negative than in positive situations. For the Turkish students, negative engaging emotions were positively associated with other-focused values and negatively with self-focused values in negative situations only.

Discussion

In summary, Study 2 replicated and extended the results obtained in Study 1, providing further support for the idea that different types of emotional experiences can be understood on the basis of the situational relevance of different types of values. As in Study 1, we found that the experience of both positive and negative disengaging emotions was more likely to be dominant when self-focused values were more relevant, and that the experience of both positive and negative

engaging emotions was more likely to be dominant when other-focused values were more relevant. Similarly, the intensity with which people experience disengaging versus engaging emotions increased depending on the situational relevance of self-focused versus other-focused values respectively – a link that was most clear for emotions that matched the situation in terms of pleasantness. Finally, we found that these effects held true across Belgian and Turkish samples.

Despite this initial evidence, both Studies 1 and 2 made use of retrospective self-reports, which may not capture concurrent emotions and values 'in the moment'. The reality that is captured by retrospective self-reports may be a 'different kind of reality' than the one people experience at a particular point in time (see, e.g., Brewer, 1994; Nisbett & Wilson, 1977; Parkinson & Manstead, 1992; Robinson & Clore, 2002). The gold standard for assessing momentary subjective experiences *in vivo* is experience sampling (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Therefore, our third study investigated whether the same links between values and emotions could be found in experience sampling data.

Study 3

To study the co-occurrence between values and emotions 'in the moment', Study 3 consisted of an experience sampling study in which we asked people to report on their concurrent values and emotions, 10 times a day for seven consecutive days.

Method

Participants. Participants were 101 Belgian college students (from different disciplines) at the University of Leuven (73% female; Mean age = 21.4 (SD = 2.13)).

Materials. For the duration of the study, participants received a smartphone on which all questionnaires were presented.

Types of situations. Because we predicted that the association between concerns and emotions would be most pronounced in *emotional* situations that matched the valence of the emotion, we asked participants at every beep to indicate whether something had happened since

the last beep: 1) 'Yes, something positive did happen'; 2) 'Yes, something negative did happen'; and 3) 'No, nothing happened at all'. In the current sample, this question was not answered for 574 situations (8%). Among the other situations, 11.6% were characterized by a negative event ($n = 733$); 32.2% by a positive event ($n = 2032$); and 56.2% by no event ($n = 3529$). This distinction between positive versus negative types of events is important as we (just like in Studies 1 and 2) expect our predictions to primarily hold true for the focal emotions that match the situations in terms of pleasantness (for a similar approach, see Kitayama et al., 2006).

Emotions. Emotions were measured by a short and adapted version of the Emotional Patterns Questionnaire. At every beep, participants indicated how they felt "right now" by moving a slider ranging from 0 (*not at all*) to 100 (*extremely*). Emotional intensity was measured in regard to 11 items that were chosen to be distributed across four categories of emotions that were defined by the valence and the social engagement dimension. The specific emotion terms were selected because of their high factor-loadings in the previous self-report studies (i.e., Study 1 and Study 2; Jasini, De Leersnyder, Phalet & Mesquita, submitted). A Principal Component Analyses on all emotion data explained 69% of the variance and yielded the intended four factor structure: 1) Positive Disengaging Emotions (proud about myself, elated/exuberant, happy/joyful); (2) Positive Engaging Emotions (relying on another, close to another); (3) Negative Disengaging Emotions (angry, disappointed, contemptuous, sad); and (4) Negative Engaging Emotions (ashamed, indebted)[xix].

As in Studies 1 and 2, we created one dichotomous and four continuous emotion scales. The *dichotomous emotion scale* indicated the type of emotions that was most intense and thus dominant in a given situation (0 = socially disengaging; 1= socially engaging). Of the 2,765 beeps that were considered 'emotional' 951 were coded as (positively or negatively) disengaging, and 897 as (positively or negatively) engaging. The dichotomous emotion scale was coded as 'missing'

(= 9) when the difference between disengaging and engaging emotions was smaller than 15 scale points (on a scale from $1 - 100$; $n_{emotional\_situations} = 917$; 33%)[xx].

The four *continuous emotion scales* were calculated by averaging the items that loaded on the corresponding factors (Positive Disengaging, $\alpha = .69$; Positive Engaging, $\alpha = .80$; Negative Disengaging, $\alpha = .80$; Negative Engaging, $\alpha = .63$).

Values in the situation. Values were measured by an adapted version of the Activated Values Scale that consisted of six values (i.e. *short VAS)*. Other-focused values were measured by loyalty and helping others (Benevolence value domain), whereas self-focused values were measured by succeeding and showing capacity (Achievement value domain). In addition, we created two general value items that pertained to broad other-focused themes (i.e. "The bond between people was respected, others were loyal or lived up to the norms and duties of our group") and broad self-focused themes (i.e.,"I was able to make my own choices, to realize my ideas, or to achieve what I deserve"). A Principal Component Analysis that explained 62% of the variance confirmed the meaning of the items by yielding 2 factors that clearly represented either Self-focused values (success, capacity, general self-focused item, $\alpha =.68$) or Other-focused values (loyalty, helping, general other-focused item, $\alpha =.69$).

The format of the items was adjusted to the smartphone: Participants were presented with one positively phrased item per value (e.g., "Since the last beep, I stayed loyal to the people I'm close with"). Participants had to indicate to what extent this statement was true for them or just 'not applicable' to their current situation.

As in Studies 1 and 2, we created two continuous variables on the situational relevance of the value-types by averaging the three items that loaded on the self-focused versus other-focused factor, respectively. As each item was coded as either 0 (*not relevant*) or 1 (*relevant*), the continuous value scales ranged from 0 (*none of the values were relevant*), to 1 (*all three of the values were relevant*), with intermediate scale points at .33, .67.

Procedure. On the first day of the study, participants came into the lab and completed some general questionnaires (e.g., demographic information). Subsequently, they received a smartphone, oral instructions for how to use the phone, and more information about the meaning of all the items used in the experience sampling; this information was also provided in a booklet that participants received at the end of the session. To make sure participants understood the instructions and became familiar with using the smartphone, the introductory session ended with collectively completing a trial version of an entire 'beep.' From the afternoon of that day onwards (7 times that first day) and during the six following days (10 times a day), participants' smartphones beeped at random times between 10 a.m. and 10 p.m. When the smartphone beeped, participants had 90 seconds to start answering the questionnaires that appeared on the screen of the smartphone. Emotions were always presented before the values, yet items were randomized within each category.

All participants received 40 euros after successfully completing the study. Each time the students entered one of the university buildings, their answers were transmitted from the smartphone onto a central server to avoid any loss of data. With the exception of one issue with four participants on the first day of the study, there were no technical problems. Furthermore, the response rate of the beeps was very good (92%), and no one dropped out of the study; on average, participants completed 62 beeps.

Data-analytic strategy. As in Study 2, the situations were nested within persons. Therefore, a Mixed Models procedure was used to analyze our data. However, for the Dominance Test that made use of the dichotomous emotion variable and thus the restricted sample of situations ($n = 1848$; 27% of total sample), we found that the multi-level 0-model fit the data much worse (-2 Log Likelihood = 13570.519) than a single level 0-model (-2 Log Likelihood = 8.795). Therefore, we here report the results of the single-level analysis; the multi-level variant yielded the exact same results and can be found in the OSM (Table A3.1). For the Intensity Test, we used

four multilevel regression analyses that made use of all data collected (n = 6868). All multilevel models included a random intercept. As in Study 2, we built nested models, each time comparing a more complex model to the more simple model. Also as in Study 2, we report the results of multilevel linear regression models with three separate dummy variables, each representing one type of emotional event (positive events, negative events, and no event), allowing us to directly test the simple slopes for both the relevance of self-focused and other-focused values in each of the three types of situations.

Results

Dominance Test. As hypothesized, a binary logistic regression including the relevance of self-focused and other-focused variables fitted the data better than the 0-model (Drop in deviance $\chi^2_{(2)}$ = 90.595, $p \leq .001$) and improved the percentage of correct classifications from 52% to 55%. As expected, the chances of experiencing engaging emotions as dominant (disengaging was again set to reference) was negatively associated with the relevance of self-focused values (B = -.419; SE = .104; Wald Chi Square$_{(1)}$ = 16.282; $p \leq .001$; Exp (B) = .658; 95% CI for Exp (B) [.537, .806]) but positively with the relevance of other-focused values (B = .978; SE = .106; Wald Chi Square$_{(1)}$ = 84.5001; $p \leq .001$; Exp (B) = 2.658; 95% CI for Exp (B) [2.158, 3.274]). People are thus 3 times more likely to experience socially engaging emotions when all other-focused concerns are relevant compared to when none are relevant and 1.5 times more likely to experience socially disengaging emotions when all self-focused concerns are relevant compared to when none are relevant.[xxi][xxii] The results are graphically represented in Figure 3.

Intensity Test. As expected, drop-in-deviance-tests (see OSM, Table A3.2) indicated that a model including predictors for both the type of events and the relevance of values better accounted for the data than models that either only included predictors for the type of events or for the relevance of self-focused and other-focused values (full analyses of these models can be found in the OSM, Tables A3.3 and A3.4).

For the most part, the results of the multilevel regression analyses confirmed that the situational relevance of values predicted the intensity of the corresponding type of emotion in situations that matched the emotion in terms of valence (see also Table 3).[xxiii] As expected, the intensity of positive engaging emotions was positively associated with the relevance of other-focused values; an effect that not only held true for positive events, but also for negative events or no events. Moreover, when there was no event, the intensity of positive engaging emotions was negatively associated with the relevance of self-focused values. Also in line with our hypothesis, the intensity of negative disengaging emotions was positively associated with the relevance of self-focused values, whereas the intensity of negative engaging emotions was only associated with the relevance of other-focused values; both effects were only significant when the emotion matched the type of event in terms of pleasantness (i.e., for negative events only).[xxiv]

The least consistent results were obtained for positive disengaging emotions: In positive events, the intensity of positive disengaging emotions was not only predicted by the relevance of self-focused values (as expected), but also, and to a larger extent, by the relevance of other-focused values, suggesting that Belgian students feel proud about themselves, elated/exuberant, and happy/joyful when helping others and being loyal are relevant aspects of positive situations (not just when they have success).

Discussion

In summary, Study 3 provided further evidence for the links between values and emotions at the situational level, by studying how they co-occur throughout participants' daily lives, without making use of prompts. The Dominance Test of this study, however, yielded weaker associations between situationally relevant values and emotions than those of Studies 1 and 2. In a series of follow-up analyses (see OSM), we investigated this issue in light of Robinson and Clore's (2002) theory on the differential use of semantic versus episodic strategies involved in reporting emotions in retrospective versus momentary questionnaires, respectively. However, we found no convincing

evidence for the idea that stronger value-emotion associations occur when people rely on semantic rather than episodic information. Future studies may further investigate this issue. For now, we conclude that the links between the situational relevance of self-focused/other-focused values and the dominance of socially disengaging/engaging emotional experience holds in experience sampling data, albeit somewhat less strongly than in retrospective self-report data."

The results of the Intensity Test further confirmed the links between situationally relevant values and the intensity of matching emotions as : a) negative *disengaging* emotions were more intense when self-focused values were relevant and less intense when other-focused values were relevant; and b) positive as well as negative *engaging* emotions were more intense when other-focused values were relevant and less intense when self-focused values were relevant. These associations were most pronounced when the type of event matched the valence of the emotion. The results from Studies 1 and 2 were thus replicated, despite the fact that we used a very different methodological approach. Nevertheless, the results in regard to positive disengaging emotions were puzzling as the situational relevance of other-focused values was a stronger predictor than the situational relevance of self-focused values. Future research should investigate the robustness of this finding by incorporating a wider range of positive disengaging emotion items as well as a wider range of self-focused and other-focused values, like we did in Studies 1 and 2, where this association did not occur.

General Discussion

The three studies combined provide clear support for the idea that emotional experience is matched to the type of concern that is activated in a specific situation. In each study, we found evidence for the link between socially disengaging emotions (e.g., pride, anger) and the situational relevance of self-focused values (e.g., ambition, success) on the one hand, and socially engaging emotions (e.g., closeness, shame) and the situational relevance of other-focused values (e.g., loyalty, helping others) on the other. These links emerged for both dichotomous and continuous

measures. The Dominance Tests showed that the most intense category of emotion in a situation is associated with the relevance of self- versus other-focused values in that situation. In addition, the Intensity Tests demonstrated that, across all situations, the intensity of a given category of emotion is associated with the relevance of the corresponding type of value, especially when the valence of the situations matched the valence of the emotion we aimed to predict. We found these associations using different samples, different cultures and different methods (retrospective self-report vs. experience sampling).

Our findings are consistent with those of previous studies that have linked values and emotions at both the cultural and the personal levels. At the cultural level, it has been found that socially disengaging emotions are most frequent and intense in cultural contexts that promote self-focused values, such as independence, autonomy, and individual rights (e.g., United States), whereas socially engaging emotions are more prevalent in cultural contexts that promote other-focused values, such as interdependence, relatedness, and social harmony (e.g., Japan; Boiger, Mesquita, Uchida, & Barrett, 2012; De Leersnyder, Boiger, & Mesquita, 2013; Kitayama et al, 2006; Mesquita, De Leersnyder, & Albert, 2014; Mesquita, De Leersnyder, & Boiger, 2016). At the individual level, two studies have found that students who experienced more socially disengaging emotions also tended to endorse self-focused values "as guiding principles in their lives," whereas students who experienced more socially engaging emotions tended to endorse more other-focused values (Fontaine, 2013; Nelissen, Dijker & De Vries, 2007).

Yet, the findings from the current studies go beyond previous research by showing associations between these different types of emotions and current concerns *at the level of situations*: The types of values that were momentarily activated were associated with the nature of the emotional experience within a given situation. Applying this insight to the earlier example, we have shown that the *situational relevance* of self-focused concerns (i.e. personal success) was linked to both Peter's and Jasmine's feelings of pride (disengaging emotions), whereas the

situational relevance of other-focused concerns (i.e. helping her family) was central to Jasmine's feelings of closeness and respect (engaging emotions). While previous research has inferred the link between concerns and emotions from culture-level or person-level differences in both concerns and emotions, this study is the first to demonstrate the link at the situation-level.

Concerns as Psychological Content of Emotional Experience.

Although most emotion scholars agree that concerns play a central role in the psychological content and/or construction of emotion (e.g., Barrett, 2006; Frijda, 1986; Scherer, 2005), only few have explicitly discussed the possibility that the situational activation of different concerns may be associated with different types of emotional experience (Lazarus, 1991; Rozin et al., 1999; Scherer, 1986). Even fewer have undertaken an attempt to test such associations empirically (Laham et al., 2010; Rozin et al., 1999). The current research is the first to outline specific predictions on the systematic co-occurrence of different types of concerns (i.e., self-focused vs. other-focused) and different categories of emotional experience (i.e. socially engaging vs. disengaging). By providing empirical evidence for these associations, our work challenges the widely endorsed notion that concerns are interchangeable with regard to the experience of emotion. For a more complete understanding of emotional experience, it is important to know *which* concerns are salient, not just *how* situations are relevant to these concerns. In this way, the notion of concerns increases our understanding of *what is felt*, or the *psychological content* of an emotion (cfr. Barrett, 2006; Barrett, Mesquita, Ochnsner, and Gross, 2007; Frijda 2007; Lambie & Marcel, 2002; Sabini & Silver, 2005).

Concerns and Appraisals

In general, concerns are thought to reflect "what is at stake" in a certain emotional situation (Frijda, 1986), whereas appraisals reflect the person's "evaluations of the environment and the person–environment interaction" (Moors, Ellsworth, Scherer, & Frijda, 2013, p. 119). As noted above, most appraisal theories propose appraisal dimensions that capture the relationship between

the person and the emotion eliciting event without referring to concerns. These concern-agnostic appraisals are thought to constitute emotion independently of *which* concern is at stake. The current research suggests that emotional experience is not independent of the type of concern, and that concerns and appraisals interact to mutually shape emotional experience. It is conceivable that different types of concerns i) modulate the link between appraisals and emotions (i.e. modulation view); or ii) activate different sets of appraisals (i.e. different sets view). Either way, the specific concerns activated in a situation would be important constituents of emotional experience.

In the *'modulation-view'*, appraisals take on different meanings depending on the specific concerns at stake. For instance, when self-focused concerns (e.g., success) are salient, the appraisal of self-agency may feel as pride, but when other-focused concerns (e.g., helping others) are salient, the same appraisal of self-agency may translate into pride and closeness combined. In contrast, the *'different sets view'* predicts that different concerns render different sets of appraisals relevant. For instance, self-focused concerns may prompt the question "Am I on top of things?" or "What about my self-esteem?" whereas other-focused concerns would lead one to question "Are my social relationships OK?" or "Are others OK?" (e.g., Mesquita & Karasawa, 2002; Mesquita et al., 2006).[xxv]

Either model calls for research on the dynamic interplay between concerns and appraisals. The *modulation-view* calls for future research that examines how emotional experience emerges from the interaction between concern-agnostic appraisals and the activation of different concerns. The *different sets-view* calls for further research on concern-specific appraisals. Existing research had proposed a limited set of such concern-specific appraisal dimensions (see footnote 1). Examples include *power* and *control* (Scherer & Ellsworth, 2003), *self-esteem* (Matsumoto, Kudoh, Scherer, & Wallbott, 1988), and *ideal self* (Tangney & Fischer, 1995). However, proposed concern-specific appraisals tend to be erratic, and lack a theoretical rationale. A systematic approach to concern-specific appraisals is needed.

Towards a meaning-centered emotion science

If anything, our findings may contribute to an increased awareness and correction of what might be considered a "Western bias" in emotion science. Indeed, most emotion theories have only focused on emotions related to self-focused concerns by, implicitly or explicitly, assuming that the default human condition is to strive for autonomy, independence, uniqueness, success, control over others and the environment, etc. For instance, whenever classic appraisal theories *do* refer to any specific appraisal content, they tend to refer to content that is thought to stem from self-focused concerns, such as self-esteem, control, agency, justice and fairness, thereby assuming that these are the only types of concerns that render situations emotional (cfr. Shweder, Haidt, Horton, & Joseph, 2008; Plutchik, 1980; Stein, Hernandez, & Trabasso, 2008). In fact, this bias may be one of the reasons why we were able to predict Peter's and Jasmine's experience of pride from the traditional appraisal dimensions, but not Jasmine's additional experiences of closeness and respect. As a result, emotions have been seen "as responses to individual gains and losses, successes and failures" (Shweder, et al., 2008, p. 421).

However, a growing body of research has documented that in many cultures the dominant concerns are other-focused rather than self-focused (Markus & Kitayama, 1991a; Mesquita & Karasawa, 2002). In much of the literature on emotions, these "other moral goods (such as loyalty, duty, and respect for status) that might be linked to the emotions are either lost or under-theorized" (Shweder, et al., 2008, p. 421). Our research suggests that these other-focused concerns, in fact, constitute a different category of emotional experience, which is more prevalent in non-Western cultures (e.g., Kitayama et al., 2006; Mesquita et al., 2016). A multi-cultural or pan-cultural emotion science should thus not only implicitly assume or refer to self-focused concerns, but should explicitly address how *both* self-focused and other-focused concerns shape people's emotional life.

Our research is part of a general paradigm shift in psychology, away from abstract, almost mathematically defined processes in which content is peripheral, towards an understanding of processes as concrete instantiations of meaning (cfr. Mesquita, Barrett, & Smith, 2010). In particular, we propose that the process of experiencing an emotion cannot be understood without giving an account of what exactly is at stake – the activated concerns. Concerns are central, rather than peripheral, to the emotional process. Thus, rather than seeing meaning as 'noise' that must be transcended in order to discover pure 'psychological' laws, we agree with Shweder that this "so-called 'noise' is not really noise at all; it is the message" (Shweder, 1991, pp. 98-99).

Limitations and Future Directions

Our research represents an important step towards improving our understanding of the content of emotional experience. We proposed that different types of concerns reflect different situational meanings, and that they may be associated with a different perspective of the emotional situation. However, future research should investigate in more depth the process by which self-focused and other-focused concerns become associated with emotions. Above, we have outlined two possible views on the intertwining between concerns and appraisals in the shaping of experience that may guide this type of future research.

In addition, the current research relied on the use of self-report, which introduces a number of limitations and raises the possibility that the current findings are a result of people's tendency to use folk theories when asked to report on their emotions and concerns. We consider this explanation unlikely, however, because we never asked people for their goals and concerns in a direct way (see Method section Study 1). Furthermore, lay people are often surprised to learn about possible relationships between concerns and emotions, rendering an elaborated folk theory on the links between specific concerns and specific categories of emotions unlikely.

In the current studies, we operationalized concerns as 'situationally relevant values,' but concerns may refer to everything that an individual cares about (Frankfurt, 1988; Frijda, 1986).

Indeed, Frijda originally introduced the concept of (current) 'concerns' in emotion theory as an umbrella term for needs, motives, major plans, goals, attachments, values, norms, expectations etc., that are pertinent at a particular point in time (Frijda, 1986, p. 334). Future investigations could address the links between emotions and other operationalizations of concerns (e.g., needs, motives, goals, beliefs, social/cultural norms, etc.). Furthermore, future research may focus on other value dimensions than the ones in the current studies (e.g., values high and low on Schwartz's Growth – Protection dimension; Schwartz, 2006).

Future studies could also investigate if there is any *causal* relationship between the situational salience of different concerns and the experience of different emotions. Throughout the current research we did not test for these links, in part because our guiding theory of emotions views concerns as constitutive elements that are implied by an emotion concept rather than as external causes that predict a particular type of experience (see Ortony et al., 1988 for a similarly descriptive view on the role of appraisals in emotion). Nevertheless, we hope that the current work may encourage other researchers (with other guiding theories of emotion) to test for the causal relationships between emotions and concerns. Finally, future research could also address under what conditions self-focused or other-focused concerns are perceived to be relevant or salient in the situation (see De Leersnyder, August 2013). Situational, individual, and cultural factors should be considered as they may each render certain types of concerns more salient than others.

Conclusion

In conclusion, the present research provides evidence for the idea that emotions and concerns are systematically linked to one another at a situational level. Across three studies we found links between, on the one hand, the experience of disengaging emotions and the situational relevance of self-focused concerns, and on the other hand, the experience of engaging emotions and the situational relevance of other-focused concerns. These findings suggest that concerns are constitutive aspects of emotional experience, and that a full understanding of emotional experience

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requires that we consider the content of what exactly is at stake in the situation. This means that if we are interested in explaining individual or cultural differences in emotion, we should consider the concerns most salient for different individuals or in different cultures within specific situations. This is how we may eventually come to better understand why Peter, a native Belgian, mainly experienced pride, while Jasmine, a first-generation Turkish immigrant, experienced not only pride, but also closeness and respect upon getting a driver's license.

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Table 1. *Results of four regression analyses predicting the intensity of different emotion scales based on Valence, the Mean Relevance of Self-focused and Other-focused values, and the interaction between the two (Study 1).*

	Positive Disengaging			Positive Engaging			Negative Disengaging			Negative Engaging		
	ΔR^2	B^a	B^b	ΔR^2	B^a	B^b	ΔR^2	B^a	B^b	ΔR^2	B^a	B^b
Step 1:	.458***			.375***			.614***			.350***		
Valence		-2.255***	-2.242***		-1.961***			2.625***	2.624***		1.880***	
Step 2:	.018*			.058***			.021**			.002		
Self-focused		.765*	.602		-.645†			.816**	.268			
Other-focused		.157	-.559		1.301***			.094	.492			
Step 3:	.024*			.002			.011†			.001		
Valence*Self-focused			.403						1.075*			
Valence*Other-focused			1.592**						-.796			
Total R^2	.499***			.433***			.630***			.350***		

Note. Valence = Dummy variable (0 = positive situation, 1 = negative situation). Self-focused = Mean Relevance Self-Focused values (VAS); Other-focused = Mean Relevance Other-Focused values (VAS).

[a] The *B*'s presented here are the ones from Step 2 (i.e., main effects of Values after controlling for the Valence of the situation).

[b] The *B*'s presented here are the ones from Step 3 (i.e., effects of Values conditional on the Valence of the situation, with Self-focused and Other-focused representing the effects of the mean relevance of self-focused and other-focused values in positive situations, and with Valence*Self-focused and Valence*Other-focused representing the additional effects of the mean relevance of self-focused and other-focused values in negative situations).

† $p = .070$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table 2. *Results of eight multi-level analyses (four analyses per culture) predicting the intensity of different emotion scales based on the Valence of the situation and the Mean Relevance of Self-focused and Other-focused values (Study 2).*

		Positive Disengaging			Positive Engaging			Negative Disengaging			Negative Engaging		
	Fixed effects	Estimate	Std. Error	p	Estimate	Std. Error	p	Estimate	Std. Error	p	Estimate	Std. Error	p
Belgian students	Positive Situation dummy	4.779	.064	≤ .001	4.554	.0801	≤ .001	1.506	.072	≤ .001	1.731	.084	≤ .001
	Negative Situation dummy	2.002	.064	≤ .001	2.530	.079	≤ .001	3.920	.071	≤ .001	3.742	.083	≤ .001
	Pos_Sit*Self-focused values	**.929**	**.271**	**≤ .001**	-1.901	.335	≤ .001	.517	.290	= .075	.396	.368	= .283
	Pos_Sit*Other-focused values	-.353	.224	= .116	**1.617**	**.277**	**≤ .001**	.460	.242	= .058	.692	.301	= .022
	Neg_Sit*Self-focused values	.447	.261	= .087	.303	.322	= .347	**1.284**	**.281**	**≤ .001**	-.322	.350	= .358
	Neg_Sit*Other-focused values	.221	.227	= .331	.488	.280	= .082	-.537	.244	= .028	**1.314**	**.305**	**≤ .001**
	Random effect												
	Intercept	.707	.063	≤ .001	.287	.087	≤ .001	.273	.068	≤ .001	.207	.101	= .041
Turkish students	*Fixed effects*												
	Positive Situation dummy	5.066	.077	≤ .001	4.740	.084	≤ .001	1.586	.078	≤ .001	1.625	.081	≤ .001
	Negative Situation dummy	1.935	.079	≤ .001	2.492	.085	≤ .001	4.046	.076	≤ .001	3.065	.079	≤ .001
	Pos_Sit*Self-focused values	**1.381**	**.295**	**≤ .001**	-.232	.304	= .445	.210	.293	= .475	.236	.332	= .477
	Pos_Sit*Other-focused values	.263	.237	= .268	**1.112**	**.250**	**≤ .001**	-.025	.240	= .918	-.066	.263	= .802
	Neg_Sit*Self-focused values	1.030	.285	≤ .001	.354	.293	= .227	**.967**	**.269**	**≤ .001**	-.976	.303	≤ .001
	Neg_Sit*Other-focused values	.099	.223	= .659	.822	.232	≤ .001	-.325	.213	= .129	**1.562**	**.240**	**≤ .001**
	Random effect												
	Intercept	.594	.100	≤ .001	.818	.109	≤ .001	.593	.097	≤ .001	.419	.110	≤ .001

Note. In this model there is no fixed effect for the intercept and no 'main effects' for the values; instead, each level of the categorical variable is represented by its own dummy variable (indicating the mean level of the DV in that type of situation) and each effect for the values is estimated for every level of the categorical variable separately (representing the simple slope of the effect in that type of situation). Self-focused values = Mean Relevance Self-focused values (VAS); Other-focused values = Mean Relevance Other-focused values (VAS). Hypothesized associations appear in bold.

Table 3.

Results of four multi-level analyses predicting the intensity of different emotion scales based on the Type of Event and the Mean Relevance of Self-focused and Other-focused values (Study 3).

	Positive Disengaging			**Positive Engaging**			**Negative Disengaging**			**Negative Engaging**		
Fixed effects	Estimate	Std. Error	*p*	Estimate	Std. Error	*p*	Estimate	Std. Error	*p*	Estimate	Std. Error	*p*
Positive Event dummy	54.45	1.030	≤ .001	53.971	1.791	≤ .001	12.144	.831	≤ .001	14.050	.989	≤ .001
Negative Event dummy	33.520	1.103	≤ .001	10.050	1.861	≤ .001	30.777	.886	≤ .001	23.635	1. 047	≤ .001
No Event dummy	45.684	.997	≤ .001	45.992	1.760	≤ .001	15.094	.808	≤ .001	15.704	.963	≤ .001
Pos_Ev*Self-focused values	**3.568**	**1.274**	**= .005**	-.346	1.6640	= .833	-.856	.986	= .385	-1.068	1.108	= .335
Pos_Ev*Other-focused values	5.553	1.416	≤ .001	**9.949**	**1.816**	**≤ .001**	-.084	1.096	= .939	2.313	1.231	= .060
Neg_Ev*Self-focused values	-3.686	1.890	= .051	-3.922	2.424	= .106	**4.678**	**1.462**	**≤ .001**	-.951	1.643	= .563
Neg_Ev*Other-focused values	2.602	1.875	= .165	11.096	2.405	≤ .001	.1568	1.451	= .914	**3.916**	**1.630**	**= .016**
No_Ev*Self-focused values	.988	.828	= .233	-3.388	1.064	≤ .001	3.872	.641	= .209	.160	.721	= .824
No_Ev*Other-focused values	4.258	.804	≤ .001	10.850	1.032	≤ .001	1.369	.622	= .051	.289	.699	= .680
Random effect												
Intercept	93.525	13.625	≤ .001	301.571	43.197	≤ .001	61.704	8.966	≤ .001	88.507	12.816	≤ .001

Note. In this model there is no fixed effect for the intercept and no 'main effects' for the values; instead, each level of the categorical variable is represented by its own dummy variable (indicating the mean level of the DV in that type of event) and each effect for the values is estimated for every level of the categorical variable separately (representing the simple slope of the effect for that type of event). Self-focused values = Mean Relevance Self-focused values (short VAS); Other-focused values = Mean Relevance Other-focused values (short VAS). Hypothesized associations appear in bold.
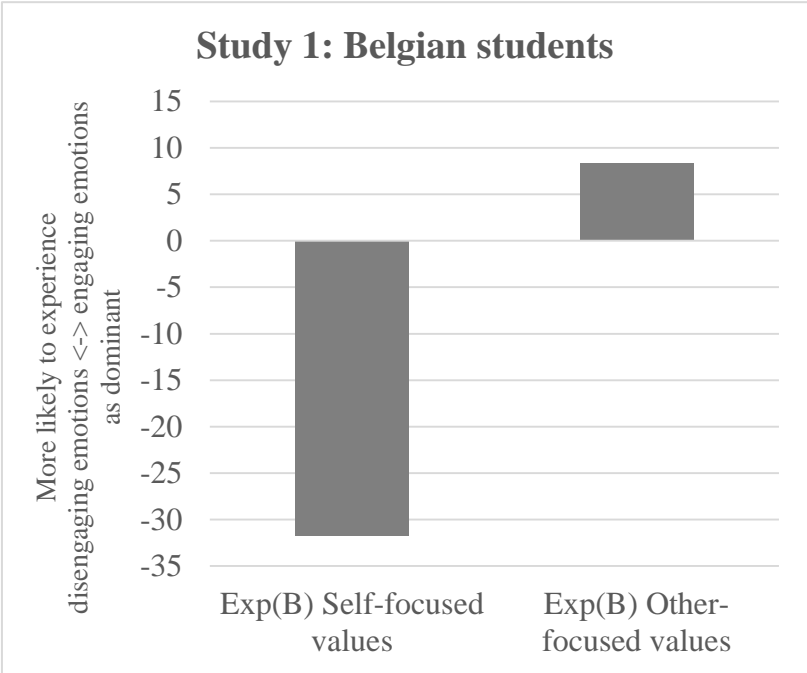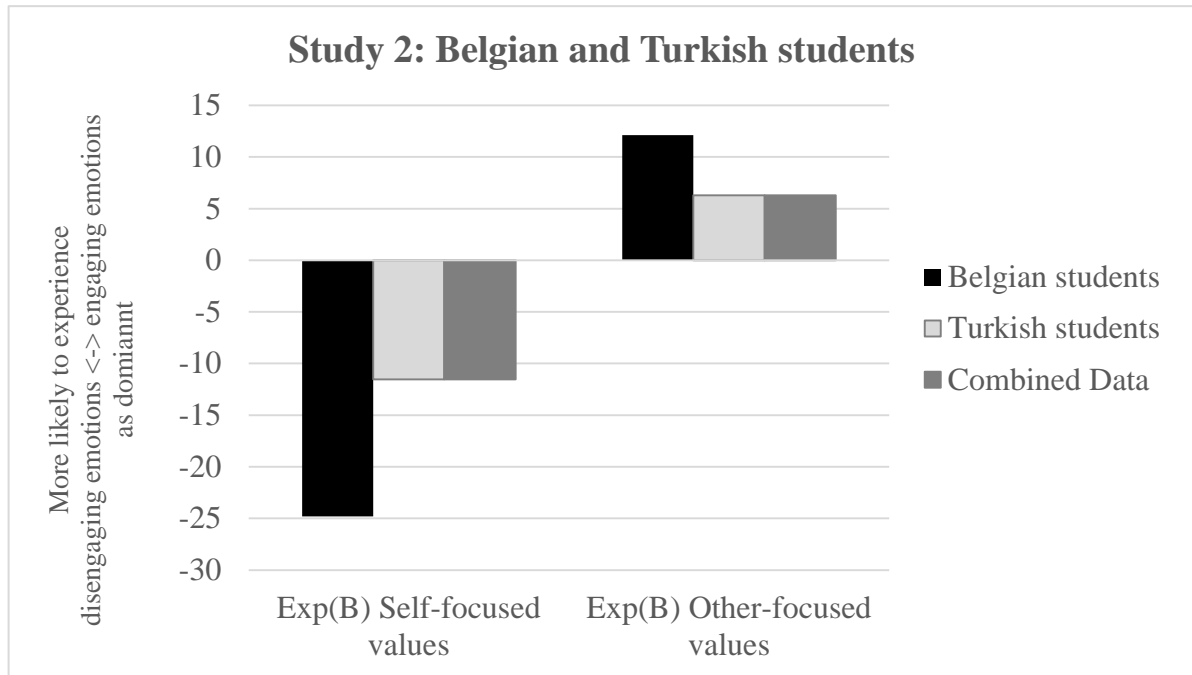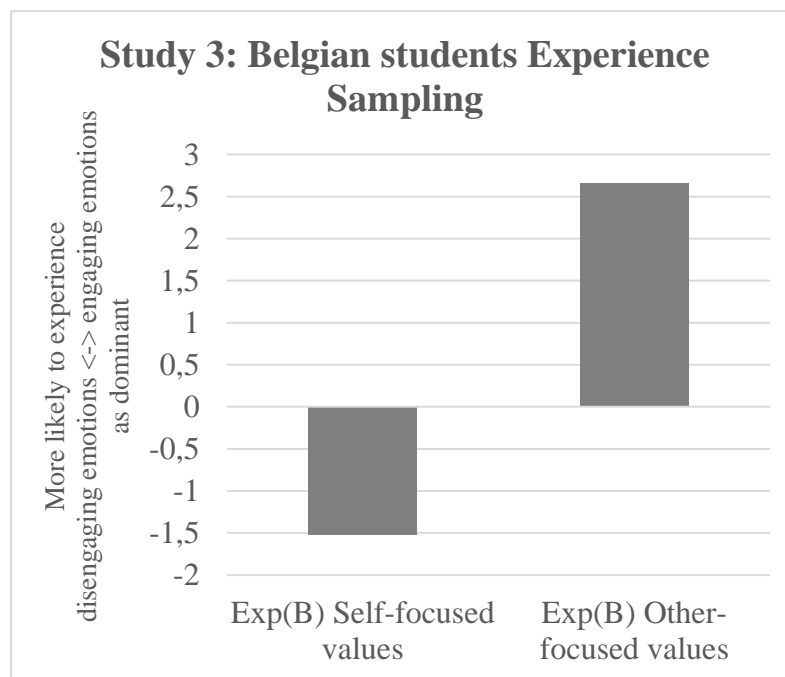
Figure 1. Odds-ratio's to experience socially disengaging versus socially engaging emotions as dominant depending if all versus none of the self-focused values and all versus none of the other-focused values are relevant in a situation (Study 1).

Figure 2. Odds-ratio's to experience socially disengaging versus socially engaging emotions as dominant depending if all versus none of the self-focused values and all versus none of the other-focused values are relevant in a situation (Study 2).

Figure 3. Odds-ratio's to experience socially disengaging versus socially engaging emotions as dominant depending if all versus none of the self-focused values and all versus none of the other-focused values are relevant in a situation (Study 3).

Endnotes

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[i] Nevertheless, there are some studies that included appraisal dimensions that are more specific in their content and *do* refer to a specific concern, such as appraisals that assess the situation in terms of *justice* (Mikula, Petri, & Tanzer, 1990), *power* and *control* (e.g., Scherer & Ellsworth, 2003), its effects on one's self-esteem (Matsumoto, Kudoh, Scherer, & Wallbott, 1988; Scherer, 1997), on the *benefits for others* (Manstead & Tetlock, 1989), on *relationships with others* (Matsumoto et al., 1988), on one's own or one's family's *respect* or *prestige* (Mesquita, 1993, 2001), and on one's *self-ideal* or salient *social identity* or *self-concept* (Tangney & Fischer, 1995; Tracy & Robins, 2004). However, the content of these appraisal dimensions has not been selected systematically. Concern-specific content has entered appraisal measurement without change in theory. Therefore, we feel confident to say that the major appraisal theories propose to understand emotional experience from concern-agnostic appraisals. We come back to this issue in the discussion section of this paper (p. 34-37).

[ii] It is likely that Peter and Jasmine would rate this situation as: i) novel; ii) intrinsically pleasant; iii) relevant to their goals; iv) conducive to their goals; v) self-caused; and vi) compatible with their norms and values. In addition, Peter and Jasmine both may have: vii) reacted to their own actions; viii) estimated their coping potential as high, and; ix) been in an appetitive motivational state.

[iii] Schwartz additionally describes a growth – protection dimension to group the values. When rotated, the self-focused-other-focused dimension can be interpreted as a self-enhancement – self-transcendence dimension and the growth-protection dimension as an openness for change – conservation dimension

[iv] The social engagement dimension may be related to the dimension of Power/Dominance, which is found to importantly define the emotional domain in addition to the dimensions of Valence and Arousal (Fontaine, Scherer, & Soriano, 2013; Fontaine, Scherer, Roesch, & Ellsworth, 2007; Gehm & Scherer, 1988; Osgood, May, & Miron, 1975; Russell & Mehrabian 1977). Of course, the dimensions of Dominance and Social Engagement are not synonymous to one another. Nevertheless, they can be thought to (at least partially) overlap because dominance can be seen as the extreme of social disengagement and autonomy-promotion, while submissiveness can be seen as the extreme of social engagement and maintaining relational harmony. In a similar way, the Social Engagement dimension of emotion may be related to approach and avoidance motivations that are often thought to be part of the emotional experience (e.g., Frijda, 1986). However, the dimensions are clearly distinct as the socially engaging emotion of shame may be associated with avoidant behaviors in some cultural contexts like the Netherlands, but with approach behaviors in some other cultural contexts like the Philippines (Bagozzi, Verbeke, & Gavino, 2003).

[v] Although the experience of anger is mostly targeted 'at someone else' and is thus clearly engaging another person in the interaction, the function of anger within the interaction is to highlight how the person experiencing anger is an autonomous and independent individual with his/her own personal boundaries, wishes and agenda. Therefore, the individual's anger serves a socially disengaging function in the relationship. Thinking about socially disengaging emotions in the terms of promoting autonomy (instead of relatedness) may be helpful in this case.

[vi] Of course, the situations that are 'ambiguous' in their social orientation and that are here set to 'missing' are interesting in themselves. In the Online Supplementary Materials (OSM), we provide an additional type of analysis in which we predict the relevance of both Self-focused and Other-focused values in each of the three types of situations: socially disengaging, socially engaging and socially ambiguous (Figure A1). The results suggest that whereas Self-focused values are more relevant in socially disengaging than in both ambiguous and engaging situations, Other-focused values are more relevant in socially engaging than in ambiguous and disengaging situations, respectively.

[vii] Originally, we explored 3 more items belonging to the Tradition/Conformity value-domain ('Being Polite', 'Confirming Expectancies', 'Showing respect') and 1 more item in the Achievement value-domain ('Taking the lead'). However, none of these items loaded well on the factor structure and further probing revealed that participants had trouble understanding these items. Therefore, we omitted them from further analyses.

[viii] Forcing the PCA to extract four factors replicated the value-domains as intended and explained 69% of the variance in our data.

[ix] These four regression analyses yielded the exact same pattern of results as a Multivariate Regression Analysis (using the GLM procedure in SPSS) in which the four (dependent) emotion variables were regressed on Valence and the relevance of Self-focused and Other-focused values. Yet, as these results are less easy to interpret we do not present them here; they can be found in the OSM, Table A1.2

[x] This analysis predicted the chance that disengaging emotions are dominant (now engaging was the reference category) and, of course, yielded the exact same statistics as the previous analysis, yet in the other direction. Now, the relevance of Self-focused values was positively associated with the outcome (B= 3.457; SE = .911; Wald Chi Square$_{(1)}$ = 14.400; $p \leq .001$; Exp(B) = 31.729; 95% CI for Exp(B) [5.321, 189.207]) whereas the relevance of Other-focused values was negatively associated with the outcome (B = -2.121; SE = .719; Wald Chi Square$_{(1)}$ = 8.707; $p = .003$; Exp (B) = .120; 95% CI for Exp (B) [.029, .491]).

[xi] We conducted a similar type of analysis for the relevance (1) versus irrelevance (0) of every value separately. We did so by means of binary logistic regressions that provide us with odds ratio's testing whether our

hypothesized association was significantly more likely than the opposite association. The results were all in the expected direction: Disengaging emotions were more likely to be most intense when each one of the self-focused values were relevant, whereas engaging emotions were more likely to be most intense when each one of the other-focused values were at stake (Complete results can be found in the OSM, Table A1.1 and Figure A4).

xii Please see OSM, Figure A2 for the results of an additional type of analysis in which we predict relevance of both Self-focused and Other-focused values in situations that are socially disengaging, engaging and ambiguous in their social orientation.

xiii Forcing the SCA to extract four factors replicated the value-domains as intended and explained 61% of the variance in the Turkish sample and 55% of the variance in the Belgian sample.

xiv When splitting the data and running a binary logistic regression for each culture separately, we find that the magnitude of the associations is stronger in the Belgian than in the Turkish sample. Specifically, when self-focused values are all relevant versus none are relevant, the chance of experiencing disengaging emotions as dominant is 12 times more likely in the Turkish sample ($\text{Exp}(B) = 11.550$) and 25 times more likely in the Belgian sample ($\text{Exp}(B) = 24.813$). Similarly, when all other-focused values are relevant versus none are relevant, the chance of experiencing engaging emotions as dominant is 6 times more likely in the Turkish sample ($\text{Exp}(B) = 6.286$) and 12 times more likely in the Belgian sample ($\text{Exp}(B) = 12.210$).

xv This likelihood ratio is based on an analysis predicting the chance that disengaging emotions are dominant (now engaging was the reference category; $\text{Exp}(B)$ of Self-focused values $= 11.550$; 95% CI for $\text{Exp}(B)$ [4.795, 27.821]); all other statistics are of course the same, disregarding their sign.

xvi As in Study 1, we repeated this type of analysis for every value separately. The results were all in the expected direction and can be found in Table A2.1 and Figure A4 in the OSM.

xvii For positive disengaging emotions, the model yielded a main effect of Culture and an interaction effect between Valence and Culture indicating that in positive situations, positive disengaging emotions are slightly higher among Belgian than among Turkish students. For negative engaging emotions, the model yielded a significant interaction between Valence and Culture, indicating that in negative situations, Turkish students experience slightly more negative engaging emotions than Belgian students. For positive engaging emotions, finally, both the 2-way interaction between Culture and Self-focused values and the 3-way interaction between Valence, Culture and Self-focused values were significant, suggesting that, in positive, but not in negative situations, Turkish students experience lower levels of positive engaging emotions than Belgians when Self-focused values are more relevant.

[xviii] Applying a Bonferroni correction to the significance level for each individual test (α/k, where k = number of tests; 0.05/4), yields a critical p-value at $p \leq .0125$. Using this new criterion to decide on the significance does not change the interpretation of the results as all p-values for our hypothesized associations were $\leq .001$.

[xix] One could argue that the items included in the Positive Disengaging emotion scale are all high arousal positive states and we, therefore, could have named this factor differently. However, we chose to stick with the term Positive Disengaging emotions for two reasons. First, these three items were chosen because they loaded highest on positive disengaging emotion factors in other studies (e.g., Jasini et al., submitted). Secondly, it has been shown that high-arousal positive emotions such as happy/joyful and elated/exuberant are more readily experienced when people aim/value to influence others (Tsai, Miao, Seppala, Yeung, & Fung, 2007), which suggests that these emotions are socially disengaging rather than socially engaging emotions.

[xx] Please see OSM, Figure A3 for the results of an additional analysis in which we predict the relevance of both Self-focused and Other-focused values in situations that are socially disengaging, engaging, or ambiguous in their social orientation.

[xxi] This likelihood ratio is based on an analysis predicting the chance that disengaging emotions are dominant (now engaging was the reference category; Exp(B) of Self-focused values $= 1.520$; 95% CI for Exp(B) [1.240, 1.864]); all other statistics are of course the same, disregarding their sign.

[xxii] When we repeated this analysis based on all emotional situations (instead of basing it on situations in which engaging and disengaging emotions differed at least 15 scale points), we obtained the same pattern of results: The chances of experiencing engaging emotions as dominant *decreased* when self-focused values were more relevant ($B = -.351$; $SE = .086$; $\text{Wald}_{(1)} = 16.715$; $p \leq .001$; Exp(B) = .704; 95% CI for Exp(B) = [.595, .833]) and *increased* when other-focused values were more relevant ($B = .682$; $SE = .087$; $\text{Wald}_{(1)} = 61.630$; $p \leq .001$; Exp(B) = 1.944; 95% CI for Exp(B) = [1.668, 2.344]). Also, when we included only those situations that were preceded by a positive or a negative event and could thus be thought of as 'emotional', we obtained the same pattern of results: The chances of experiencing engaging emotions as dominant *decreased* when self-focused values were more relevant ($B = -.375$; $SE = .177$; $\text{Wald}_{(1)} = 4.478$; $p = .034$; Exp(B) = .687; 95% CI for Exp(B) = [.486, .973]) and *increased* when other-focused values were more relevant ($B = 1.184$; $SE = .168$; $\text{Wald}_{(1)} = 35.689$; $p \leq .001$; Exp(B) = 3.269; 95% CI for Exp(B) = [2.216, 4.821]).

[xxiii] Setting the critical p-value at $p \leq .0125$ to correct for the possibility of Type I error (i.e. Bonferroni correction), implies that three out of the four hypothesized associations remain highly significant ($p \leq .005$), while the link

between the relevance of other-focused values in negative situations and the experience of negative engaging emotions is still marginally significant ($p = .016$).

[xxiv] The model including all fixed effects predicting negative engaging emotions was only marginally significantly better than the model including a fixed effect for the type of event only. As is recommended for multi-level analyses, we removed the fixed effects that were non-significant (here, the relevance of self-focused values) and tested the model again. Now, the model fit was significantly better than the fit of the model with event-type predictors only. The fixed effects for both the types of events and the relevance of other-focused concerns were the same as in the full model.

[xxv] Similarly, the nature of the concerns activated may translate into different types of action readiness or coping efforts. Situations centering on self-focused concerns may be more readily associated with attempts to be effective or competent, to gain more control if this is lacking, and to influence others in order to realize one's personal concerns (Boiger, Mesquita, Tsai, & Markus, 2012). In contrast, situations centering on other-focused concerns may be more readily associated with attempts to accommodate others in order to improve relationships or restore social harmony. Thus, different concerns may be matched to different emotional experiences because the focus of the concern implicates different conceptions of the situation and different types of behavioral motivation. As such, concerns not only afford and limit how the situational content is approached (i.e. which appraisals are considered relevant), but also which behavioral options are considered (i.e. which action readiness modes are considered relevant).