

## What Good Are Positive Emotions?

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Summary and Notes

### **Abstract**

Any review of the psychological literature on emotions will show that psychologists have typically favored negative emotions in theory building and hypothesis testing. In doing so, psychologists have inadvertently marginalized the emotions, such as **joy, interest, contentment, and love**, that share a pleasant subjective feel. Experiences of positive emotions are central to human nature and contribute richly to the quality of people's lives. But how? In which domains? Through what mechanisms?

Psychology sorely needs more studies on positive emotions to guide applications and interventions that might improve individual and collective functioning, psychological well-being, and physical health.

The purpose of this article is to introduce a new model of the form and function of a subset of discrete positive emotions. Empirical (based on observed and measured phenomena) studies that provide both direct and indirect support for this new perspective are featured.

### **Why Have Positive Emotions Been Marginalized?**

One reason why positive emotions may have garnered so little attention is that relative to negative emotions, positive emotions are fewer in number and rather diffuse. For instance, scientific classification of discrete or basic emotions typically identifies only one positive emotion for every three or four negative emotions, an imbalance also reflected in English-language words.

Interestingly, the relative lack of differentiation among the positive emotions is evident across the various components of the emotion process:

1. Facial component: specific negative emotions have unique and universally recognized signal value. By contrast, specific positive emotions appear to have no unique signal value, but instead share the *Duchenne smile* (raised lip corners accompanied by muscle construction around the eyes).
2. Similarly, specificity in autonomic (involuntary) responding has been demonstrated between negative and positive emotions, and, to some degree, among the negative emotions. The positive emotions, by contrast, have not yielded distinguishable autonomic responses except those that evoke outright laughter.
3. The personal, experiential component, also reveals additional asymmetry in distinctiveness as people tend to self-report differentiation among various negative emotion terms and not so much among various positive emotion terms, reflecting a greater degree of *blending*.

It has been suggested that natural selection shapes emotions only for situations that contain threats or opportunities. There are more negative than positive emotions because there are more different kinds of threats than opportunities and the cost of failure to recognize a threat could be dire.

### **Problems Demand Attention**

A second reason for the relative neglect of positive emotions is that, as a field, psychology gravitates toward problems and works to solve them. Anger, and its management, for instance, have been implicated in the etiology (set of causes) of heart disease, some cancers, as well as in aggression and violence, especially in men and boys. Relatedly, sexual jealousy has been implicated in domestic violence. Fear and anxiety fuel phobias and other anxiety disorders. For some individuals, sadness and grief may swell into unipolar depression, which is the single most common psychological disorder at the present time (17% of adults in 1999), and a likely trigger of suicide. Shame may be another route to depression and to eating disorders and sexual dysfunction. The list could go on.

Given the vast array of human suffering and loss that stems from excessive or inappropriately expressed negative emotions, the press to understand these emotions is immense. The misfortune of this triage strategy is that even though positive emotions may not spark problems of much magnitude or frequency (the mania phase of bipolar disorder, for example) as negative emotions, they may in fact provide some important solutions to the problems negative emotions generate.

### **Models Built on Prototypes**

A third reason positive emotions have been marginalized is that, for the most part, emotion theorists have taken their mission to explain emotions in general. Emotions like fear and anger have most often served as the prototypes.

For example, a current theorist model of emotions: emotions are, by definition, associated with urges to act in particular ways, urges that have been called **specific action tendencies**. Anger, for instance, creates the urge to attack, fear the urge to escape, disgust the urge to expel, guilt the urge to make amends, sadness the urge to withdraw, and so on. People's ideas about possible courses of action narrow in on these specific urges. Whether these urges become actions depends on the complex interplay of:

Intentions

Impulse control

Coping Styles

Cultural norms

Particular contexts of the moment

Also, *specific action tendencies* are not simply thoughts existing in the mind, they are **embodied** thoughts because specific action tendencies and organized physiological change go hand in hand. According to some theorists, the main function of emotions is organization aimed at creating “the optimal physiological environment to support the particular behavior that is called forth. For example, when you have an urge to escape when feeling fear, your body reacts by mobilizing appropriate automatic support for the possibility of running - increased blood flow to large muscle groups, etc. Through *specific action tendencies*, emotions prepare both mind and body to act in specific ways. The action tendency is what makes an emotion embodied.

The specific action tendencies that emotions spark represent those actions that worked best when human ancestors faced threats to life and limb. According to this view, emotions can promote quick and specific life-preserving and life-serving actions.

However, fitting positive emotions into this purportedly emotion-general model raises some questions and problems. Specific action tendencies named for positive emotions are not nearly as specific as those named for the negative emotions. At very best they resemble generic orientations towards action or inaction, rather than the urge to do something quite specific, like fight, flee or freeze. For example, it is suggested that “relief” is associated with “ceasing to be vigilant”. But this leaves the question, cease vigilance and do what?

Therefore, it is argued that positive emotions do not fit the above models for negative emotions. First of all, they do not typically arise in life-threatening situations, and perhaps by consequence, they do not seem to create well-defined urges to pursue a specific course of action. What good are positive emotions then? Do they have an evolutionary adaptive value? Existing emotion-general models hinder our ability to answer these questions.

### **Liberate Models of Positive Emotions**

If positive emotions do not share with negative emotions the hallmark feature of promoting and supporting specific actions, why does the capacity to experience positive emotions seem to be a part of universal human nature?

Why not allow different theories for distinct emotions, e.g., a theory of anger? Still another multiple-model landscape would allow one model to describe a subset of distinct negative emotions (anger, fear, disgust) and a separate model to describe a subset of distinct positive emotions (joy, contentment, interest, love).

In building more suitable models for the subset of positive emotions, it is proposed to discard two key assumptions:

1. The presumption that emotions must necessarily yield specific action tendencies (urges). Positive emotions tend to be less prescriptive about which particular actions should be taken. Positive emotions could be said to yield **nonspecific action tendencies**, such as the “free activation” that has been linked to joy.
2. The presumption that emotions must necessarily spark tendencies to physical action. Some positive emotions seem instead to spark changes primarily in cognitive activity, with changes in physical activity (if any) following from these cognitive changes.

So in place of action tendencies, it is proposed to speak of **thought-action tendencies**. Also, instead of presuming that these thought-action tendencies are specific, that there is a relative **breadth** in a **momentary thought-action sequence**.

### **Breadth of the Momentary Thought-Action Repertoire**

Using the additional terms above, negative emotions function to **narrow** a person’s momentary thought-action repertoire. They do so via time-tested, adaptive actions represented by specific action tendencies in life-threatening situations that require quick and decisive action in order to survive.

By contrast, many positive emotions seem not to (and perhaps need not) narrow a person’s momentary thought-action repertoire. The proposed alternate view is that many positive emotions **broaden** a person’s thought-action repertoire. Accordingly, experiences of certain positive emotions prompt individuals to discard time-tested or automatic (everyday) behavioral scripts and to **pursue novel, creative, and often unscripted paths of thought and action**. This new perspective also might illuminate why and how positive emotions might serve as effective tools for regulating negative emotions.

### **Descriptions of Four Positive Emotions**

Now in greater detail, the four positive emotions: joy, interest, contentment, and love. The two reasons for choosing these emotions:

1. They appear to be maximally distinct from one another (with the exception of love)
2. They appear to be recognizable, if not equally frequent, across cultures

In using these specific emotion terms, it is in the context of **emotion families**, therefore, not a single effective state but rather a family of related states characterized by a common theme. For each of these emotions, there will be a description of the circumstances that tend to elicit the emotion, apparent changes in the momentary thought-action repertoire, and the consequences or outcomes of these changes.

## **Joy**

Joy is often used interchangeably with happiness and shares conceptual space with other relatively high-arousal positive emotions such as amusement, elation and gladness. Feelings of joy arise in contexts appraised as safe and familiar and requiring low effort, and in some cases, by events construed as accomplishments or progress towards one's goals. The clearest statement on the action tendency associated with joy, termed **free activation**, "it is in part aimless, un-asked for readiness to engage in whatever interaction presents itself and in part readiness to engage in enjoyments".

In other words, joy creates the urge to play and be playful in the broadest sense of the word, encompassing not only physical and social play, but also intellectual and artistic play. Play, especially imaginative play, is to a large degree unscripted. It involves exploration, invention, and just fooling around. Joy and related emotions can thus be described as **broadening** an individual's thought-action repertoire.

Although play can be aimless it also promotes skill acquisition. Physical skills are developed in rough-and-tumble play, manipulative-cognitive skills are practiced in object play, and social-affective skills in social play. These newly acquired resources and skills are durable and can be drawn on later, long after the instigating experience of joy has subsided.

## **Interest**

Interest is sometimes used interchangeably with curiosity, intrigue, excitement, or wonder and shares conceptual space with challenge and intrinsic motivation. What Csikszentmihalyi calls **flow**, or the enjoyment experienced when a person's perceived skills match the perceived challenges or a particular activity, represents a form of interest. Interest arises in contexts appraised as safe and as offering novelty, change, and a sense of possibility while also requiring effort and attention.

The momentary thought-action tendency sparked by interest is **exploration**, explicitly and actively aimed at increasing knowledge of and experience with a target of interest. Interest generates "a feeling of wanting to investigate, become involved, or extend and expand the self by incorporating new information and having new experiences with other persons or objects that has stimulated the interest". Interest may or may not be accompanied by overt physical action but the openness to new ideas, experiences, and actions is what characterizes the mindset of interest as **broadened**, rather than narrowed.

Interested individuals explore for **intrinsic** reasons - to satisfy their own inner curiosity - and can have reliable outcomes, most obviously, exploration increases an individual's knowledge base. For example, landscapes that are at once mysterious and easy-to-read reliably, may have encouraged human ancestors to explore and seek new information, which in turn served to update and extend their cognitive maps. This expanded knowledge could then be used later in instances that threatened survival (finding water, food, escape routes, or hiding places). Therefore, interest not only broadens momentary thought-action, but over time and as a result of this exploration, interest also builds a person's store of knowledge - a durable resource that can be accessed at a later time. Interest, then, can be said to be the instigator of **personal growth, creative endeavor, and the development of intelligence.**

### **Contentment**

Contentment is often used interchangeably with other low-arousal positive-emotion terms such as tranquility or serenity and shares conceptual space with mild or receptive joy, and to some degree, relief. Contentment should be distinguished from pleasure, the affective response to meeting bodily needs (food, warmth, rest, or sex). It arises in situations appraised as safe and having a high degree of certainty and a low degree of effort.

At first blush, contentment appears to have no real action tendency, and has been described and linked with relief as ceasing vigilance. It may be that the changes sparked by contentment are more cognitive than physical. Contentment, one could argue, is not simply passivity, but rather a mindful **broadening** of a person's self view and world views, to integrate recent events and achievements, to savor their current life circumstances and experience "oneness" with the world around them.

Moreover, contentment appears to be the positive emotion that follows experiences that are described as **flow** (in connection with joy). Per Csikszentmihalyi, "when the flow episode is over, one feels more "together" than before, not only internally, but also in respect to other people and to the world in general; the self becomes complex as a result of experiencing flow". Contentment then creates the urge to savor and integrate recent events and experiences and create a new sense of self and a new world view. By increasing **self-complexity** via receptiveness and integration, contentment broadens an individual's momentary thought-action repertoire and builds their personal resources.

## **Love**

Most theorists acknowledge that love is not a single emotion and that people experience varieties of love (romantic, companionate, caregiver, attachment to caregivers). Love experiences are felt towards specific individuals and are therefore necessarily contextualized by these relationships. Love experiences are made up of many positive emotions, including interest, joy, and contentment. Per Izard, “friends renew your interest by revealing new aspects of themselves and the resulting increase in familiarity and deeper knowledge of them brings joy and contentment. In lasting friendships or love relationships this cycle is repeated endlessly”. So to the extent that love triggers the positive emotions of interest, contentment, and joy, it also **broadens** the momentary thought-action repertoire as people explore, savor and play with the people they love.

The interactions inspired by love no doubt help to build and strengthen social bonds and attachment, which are satisfying in and of themselves, but are also likely to be the locus of subsequent social support and therefore build and solidify an individual’s social resources. Like intellectual and physical resources, social resources can accumulate and be drawn on later.

## **Positive Emotions Broaden and Build**

A parallelism is emerging here: Not only do positive emotions share the feature of broadening an individual’s momentary thought-action repertoire, but they also appear to share the feather of building a person’s personal resources. Importantly, these resources are more durable than the transient emotional states that led to their acquisition. These acquired resources can then be drawn on later in other contexts and in other emotional states, thus, the **broaden-and-build model of positive emotions**.

## **Empirical Support for the Broaden-and-Build Model**

The existing empirical support for these propositions is not as extensive as one would like. However, fruitful connections can be drawn from work on other levels of effective phenomena, such as positive moods and positive affective traits.

## **Positive Emotions Broaden the Scope of Attention**

Easterbrook (1959), decades ago proposed that negative emotional states - particularly high arousal ones like anxiety and fear - serve to narrow people’s attentional focus. It has since received ample empirical support. People experiencing certain negative emotions, then, tend to miss the forest for the trees.

More recently, it has been proposed that positive emotions, even high-arousal positive emotions such as elation and mania, lead to an opposite effect: an expansion of attentional focus. Clinical research on main cognition finds that manic people, like creatives, tend to use overinclusive categories (ideas that aren't normally combined together cognitively). The expansiveness of thinking evident among manic people varies with lithium treatment and tends to diminish the patient's creativity, which can lead to some patients' resistance to the treatment.

Laboratory studies offer preliminary support of negative emotional states producing a local, detail oriented attention state vs a global attention state when experiencing positive emotions. Anxiety and depression predict a local bias consistent with a narrowed attentional focus, whereas positive subjective well-being and optimism predict a global bias consistent with a broadened attentional focus. Although study designs using a "neutral" emotion state comparison group are lacking, the existing evidence is consistent with the view that traits and situations that promote positive emotions **broaden individuals' attentional scope**, allowing them to see both the forest and the trees.

### **Positive Emotions Broaden the Scope of Cognition**

In the 1980's, Alice Isen began a program of research to investigate the influence of positive affect on cognition. Her work is exemplary because:

1. She has not assumed that positive and negative affect are "opposites" and by consequence consistently included neutral control groups to allow for independent effects to be studied.
2. Across their studies, Isen and colleagues induce positive affect in multiple ways (receiving candy, reading cartoons, hear success feedback, view a short comedy film or read a series of positive words. This diversity of affect inductions enhances the ability to generalize from this line of work.

Taken as a whole, Isen's teams' research suggests that positive affect "gives rise to an enlarged cognitive context". For example, they found that relative to neutral control conditions, individuals experiencing positive affect named more unusual associations to neutral words, more often saw fringe examples of a given category as included within the category and created more inclusive categories. These and other findings have led Isen to conclude that positive affect leads people to see relatedness and interconnections among thoughts and ideas and to process material in a more integrated and flexible fashion. Also, they found that positive affect leads to more extensive cognitive collaboration on ideas or concepts and that this may facilitate memory.



Isen and colleagues have also shown that positive affect also influences creative thinking via Mednick's Remote Association Test and Torrance's creativity test. Results of these studies underscore that creative thinking is to some degree a state-like variable that can be increased during experiences of positive affect. Isen's program of research provides empirical support for the claim that positive emotions **broaden the scope of cognition**.

### **Positive Emotions Broaden the Scope of Action**

Studies that show that positive affect broadens the scope of thinking can be taken as indirect evidence that positive affect will also broaden the scope of action, measured as either actual behavior or behavioral intentions.

Compared to those in a neutral control condition, individuals experiencing positive affect more frequently enacted the correct (creative) solution by using a set of given objects in unusual ways, that adults sought more variety when choosing among safe and enjoyable consumer products and that when play objects elicited interest, children showed a wider range of types of play, more variations of action within play types and longer play episodes.

### **Positive Emotions Build Physical Resources**

It is argued that joy and related high-energy positive emotions create an urge to play and be playful, which when acted on, can build personal resources. Rough-and-tumble play is a highly physical form of play that involves play fighting and play chasing with frequent role reversals.

The idea that physical play facilitates muscle growth and general physical and cardiovascular fitness, across cultures as well as in nonhuman mammals, was advanced a century ago. Some theorists, additionally, have argued that this type of play, though largely unscripted, serves to develop and practice specific physical skills, namely for hunting, fighting, or predator avoidance. Ethologists (those who study the behavior of animals in their natural habitat) have detailed similarities between actions evident in juveniles of a species during play and those evident in adults of the same species during life-threats. This had led them to conclude that play chasing serves to build specific locomotor skills that can be drawn on later during emergencies.

Ethologists have also uncovered conspicuous similarities between specific forms of play fighting seen among juveniles of a species and aggressive fighting seen among adults. The added observation that males engage in more vigorous and frequent play fighting is consistent with the evolutionary claim that fighting skills were more critical for male members of the species, especially with respect to establishing relative dominance and securing mates.

Although the vast majority of evidence is correlational, in one experiment, rats were either deprived of juvenile social play or not. Later testing showed that deprived rats were slower to learn a complex motor task, suggesting that play also fosters overall behavioral flexibility.

### **Positive Emotions Build Intellectual Resources**

A central notion of attachment theory is that, for children whose attachment needs are met, mothers provide a secure base from which to explore. The early love relationship between infant and caregiver provides a foundation of interest-inspired exploration, which in turn can increase the child's cognitive or intellectual resources. Children identified as securely attached have been shown to be more persistent, enthusiastic, and effective in problem solving than their peers as well as more flexible and resourceful. They also engage in more independent exploration of a novel physical space, and in turn develop superior cognitive maps of that space. These findings suggest that interest is a fragile emotion that can be suppressed or even eliminated in children whose innate attachment needs are not met.

Interest remains an important motivator for learning from childhood through adulthood. Learning motivated by **intrinsic interest** is more efficient than learning motivated by extrinsic rewards and has shown links to greater conceptual understanding, higher levels of academic achievement, lower drop-out rates, and greater psychological adjustment.

Studies also provide support for the claim that positive emotions build intellectual resources through enhanced learning and performance. Remarkably, simply asking students to think for less than 1 minute of a happy moment from their lives before learning or test taking produces significant increases in intellectual gains and performance. Taken as a whole, experiments support the claim that positive emotions, though short lived, facilitate learning and mastery, the products of which can become part of the individual's enduring intellectual resources.

### **Positive Emotions Build Social Resources**

Enduring social relationships are critical to both individual and collective survival, particularly for infants, who rely almost exclusively on parents to care for their basic needs. Shared experiences of positive emotions - **through mutual smiles or social play** - create not only mutual enjoyment in the moment, but also enduring alliances, friendships or family bonds. These relationships become enduring resources that can be drawn on later in time of need. The importance of the smile to relationship formation is perhaps most evident in its absence. Individuals born with facial paralysis, and therefore unable to partake in mutual smiling, report difficulty in developing and maintaining even casual personal relationships.

A long tradition of social psychology research suggests that experiencing positive affect increases the likelihood of altruism, which in turn can engender the positive emotion of gratitude in the person who receives the help. This can lead to reciprocity of altruism and thus form the base for a continuing cooperative relationship.

### **Are Positive Emotions Evolved Adaptations?**

The emerging evidence provides preliminary support for the proposal that positive emotions broaden attention, thinking, and action and build physical, intellectual, and social resources. But even the somewhat limited support raises the “why” question. Why might positive emotions have developed/evolved to broaden people’s thought-action repertoires? What sort of adaptive problem might the outcomes of positive emotional states have reliably solved? What would make up an evolutionary functional analysis of positive emotions?

A first step is to describe the ancestral environmental circumstances in which positive emotions occurred. Perceived **safety** and **satiation**, or freedom from harm and bodily need, is common in circumstances that elicit joy, interest, contentment and love. Given the moment-to-moment fluctuations in safety and satiation, the ability to recognize and take advantage of the opportunities inherent in safe and satiated moments would have been important. Given all of the options possible - sleep, sit around, continue to evade, attack, expel or be vigilant - why might thought-action sequences promoted by positive emotions - play, explore or savor - have led to a reproductive advantage?

Perhaps most critical from an evolutionary perspective is the connection positive emotions have to what is termed **resource building**. In broadening an individual’s momentary thought-action repertoires, whether through play, exploration, or savoring and integrating, positive emotions promote discovery of novel and creative ideas and actions, which in turn expand the individual’s personal resources, whether they be physical, intellectual or social. These resources are durable and can be drawn on in later moments.

The adaptive value of positive emotions for human ancestors was not necessarily direct and immediate as was the adaptive value of negative emotions. Rather, our ancestors would have benefited from resource building in the long run. When later faced with inevitable threats of life and limb, these resources would have translated into increased odds of survival and, in turn, increased odds of living long enough to reproduce. To the extent that the capacity to experience emotions is genetically coded, this capacity, through the process of natural selection, is likely to have become part of universal human nature.

## Implications of the Broaden-and-Build Model of Positive Emotions

The following proffers two implications that the broaden-and-build model might have for present day humans in contemporary society.

### 1, Positive Emotions May Undo the Aftereffects of Negative Emotions

If the broaden-and-build model is accurate, then positive emotions ought to function as *antidotes* for the lingering effects of negative emotions, which serve to narrow an individual's thought-action repertoire. This idea that positive emotions might "correct", "restore", or "undo" the aftereffects of negative emotions has been developed by a handful of emotions therapists (Cabanac, Fredrickson & Levison, Lazarus, Kanner & Folkman, Solomon).

It has been suggested that one effect of positive emotions may be to loosen the hold that (no-longer-relevant) negative emotions gain on an individual's mind and body by dismantling or undoing the psychological and physiological preparation for specific action.

One facet of the **undoing hypothesis** predicts that positive emotions restore autonomic rest or tranquility following negative emotional arousal. A switch from a negative emotion to a positive emotion may in effect rid individuals of the physiological after-effect of action readiness. Studies that had participants view a short film that elicited fear were then shown one of four secondary films. One film elicited contentment, another mild amusement, another sadness, and then the control group and abstract visual display. The two groups that viewed the positive film returned to baseline levels of cardiovascular activation within 20 seconds, compared to 40 and 60 seconds for those that viewed the neutral and sad films. This is an example of the undoing effect of positive emotions.

Assuming that the cardiovascular activation that accompanies negative emotions serves to prepare the body for specific action, it may be by quelling this cardiovascular activation, positive emotions help the body efficiently trade (a no-longer-useful) narrow thought-action repertoire for a broader one, allowing the individual to pursue a wide array of thoughts and actions

A second facet of the undoing hypothesis predicts that positive emotions also restore **flexible thinking** following lingering negative emotional experiences. Indirect evidence consistent with the prediction can be drawn from a collection of correlational studies that show that laughter and a coping style marked by a sense of humor are associated with the ability to distance oneself from distressing events. Also, individuals with higher levels of humor respond to a stressful academic exam with more problem-focused coping and greater emotional distance which can then prompt them to explore avenues of thought and action other than those prompted by any initial negative emotion.

## **2. Positive Emotions May Protect Health**

Negative emotions have been implicated in a number of societal problems. Chief among these are physical health problems, most notably, coronary heart disease and some cancers. Studies in behavioral medicine have documented the effectiveness of relaxation therapies for treating cardiovascular disorders. Studies have tracked changes in mood, physical symptoms, and immune system ratios on a daily basis and found within-subject correlations between positive mood and immune system functioning. Given the individual and societal costs associated with physical disease and illness, this possibility alone justifies continued investigations of the nature and effects of positive emotions.