

positive emotions

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Positive emotions are brief experiences that feel good in the present and increase the chances that one will feel good in the future. They seem to be essential ingredients to the recipe of living the good life. Understanding positive emotions is a core objective of positive psychology.

The study of emotions in psychology is relatively recent, with emotions only being the subject of sustained empirical scrutiny since around the 1960's. Even then, the empirical focus was almost always—and almost always exclusively—on negative emotions. Groundbreaking researchers, including first Alice Isen and subsequently Barbara Fredrickson, started to give systematic attention to positive emotions from the 1980's onwards, and there is now a growing body of evidence to support their occurrence and implications. There is, however, consistent evidence that people generally have a bias toward attending to the negative, which may in large part account for the absence of research into positive emotions until the last 20 years or so.

Neglecting Positive Emotions

There is a general bias to give more weight to negative entities (e.g., emotions and personal traits) compared with positive entities. Generally, negative events and information seem to command more attention over positive ones. This makes sense from an evolutionary perspective. Someone who misses a positive outcome may later experience regret for not experiencing pleasure or growth, but they'll survive. In comparison, someone who fails to notice danger may suffer the ultimate negative outcome—death.

Baumeister and colleagues argue that bad is stronger than good across many psychological phenomena. For example, bad impressions and stereotypes form quicker and are more difficult to alter compared with good ones. People get more upset over losing \$50 than they are happy winning \$50. Bad events influence both good and bad moods, whereas good events only influence good moods. Having a good day will unlikely influence someone's next day, but having a bad day will likely influence someone's next day—for the worse. Numerous types of trauma, even if it's a sole occurrence, can have severe and lasting negative effects on behavior, but research doesn't support the idea that a sole positive event can have similarly strong and lasting effects. For example, being sexually abused once can have long-term deleterious effects. One experience of sexual bliss has not been shown to predict comparable long-term positive effects.

Thanks largely to Isen and Fredrickson, empirical evidence supporting the role of positive emotions in promoting personal growth and development is accumulating. By increasing our thought-action repertoires (i.e., by broadening our cognitive and behavioral flexibility and options) and subsequently engendering physical, intellectual, and social resources, positive emotions improve coping and thus build resilience. Resiliency, in turn, predicts future occurrences of positive emotions. With positive emotions demonstrating such robust relationships to goal-achievement, physical and mental health, and other positive outcomes, it makes sense for psychology to further the understanding of positive emotions.

In her seminal article *What Good Are Positive Emotions?* Fredrickson suggested that positive emotions receive less attention than negative emotions for several possible reasons. First, compared with negative emotions, positive emotions are limited in quantity. The English language reflects this disparity. More words exist describing negative emotions relative to positive ones. Positive emotions, compared with negative ones, also don't have distinct facial expression or autonomic responses. Someone experiencing gratitude may express appreciation with relatively little behavioral or physiological change. An angry person, in contrast, may have snarled lips, a fist pumping, and a raised sympathetic nervous system response (e.g., increased blood flow to the muscles). While uncertain if the beneficiary experienced gratitude, it's evident that the fist-pumping individual is angry.

Second, some argue that psychology wears problem-focused lenses. It focuses on the negative. Although aiming to reduce negative emotions is an integral part of treatment, it may be insufficient for facilitating positive emotions, especially since some suggest that negative and positive emotions operate largely independently. Mental illness, usually involving negative emotions, is associated with more missed workdays, unhealthy psychosocial functioning, poorer physical health (e.g., cardiovascular disease), and limited daily activities. It therefore makes sense, some argue, to put the investigation of negative emotions ahead of positive ones. Positive emotions, however, have been shown to both undo and decrease physiological responses triggered by negative emotions (e.g., increased heart rate). Promoting positive emotions may be a fruitful psychological investment in the long-term.

Finally, emotion theorists have aimed to appreciate emotions in general. Emotion specific models largely reflecting prototypic emotions (e.g., anger, fear) have thus developed. But understanding anger doesn't necessarily lead to a greater understanding of joy, hope, or gratitude. A different theory is needed for positive emotions, and it was this theory that Fredrickson developed.

The Broaden-and-Build Theory of Positive Emotions

A single general-purpose model of emotions inadequately describes positive emotions. This realization sparked Fredrickson to develop her broaden-and-build theory of positive emotions. Negative emotions narrow our focus and restrict our behavioral range. Fredrickson argued that positive emotions yield nonspecific action tendencies beyond physical action. She proposed that positive emotions generate broad thought-action repertoires that ultimately build enduring physical, intellectual, and social resources.

Regarding physical resources, certain species use similar maneuvers during play and survival situations. For instance, while playing young patas monkeys run into foliage and catapult themselves away from their playmate. Adults in this species do the same when running from predators. The physical skills used and acquired during play apparently aid in survival.

Intellectual resources can be built via experiencing positive emotions such as joy. Here, joy will trigger explorative behaviors, subsequently engendering greater knowledge about one's environment. This information may prove useful in the acquisition of basic and applied knowledge. To illustrate, a young child who is securely attached to his caregiver will likely feel comfortable exploring his surroundings. Doing so he may learn both who is in the environment (i.e., basic knowledge) and who is approachable enough to help in the future if needed (i.e., applied knowledge). Hence, he has built enduring intellectual resources.

Social resources can be built via the experience and expression of gratitude—one of the more popular empirically studied positive emotions. Gratitude doesn't prompt one to reciprocate benefits in a tit-for-tat fashion. Instead, it can stretch one to repay kindness creatively.

Fredrickson suggests that these new methods for repaying kindness can become enduring skills in someone's repertoire for strengthening relationships and building social capital. Indeed, grateful individuals may act prosocially as a way of merely expressing their gratitude. Over time, however, these actions can have lasting impacts on people's social relationships. Gratitude helps build trust in social relationships. Thus, gratitude may serve to maintain and build social resources.

A recent meta-analysis by Lyubomirsky, King, and Diener, in which the results of over 300 studies were aggregated, suggests that success engenders positive emotions—but also that positive emotions engender success. Indeed, happy people tend to live longer, make more money, and enjoy enduring loving relationships. One reason that positive emotions (e.g., happiness) might cause human flourishing could be because of the durable resources—physical, intellectual, and social—that were built over time. These resources can then be tapped into during times of adversity, as well as in times of growth.

Positive Emotions: Past and Present

Research on positive emotions has changed over the past few decades. Beginning in the 1980's and continuing today, much of the research conducted by Isen is focused on the role of positive emotions in cognitive processes. Specifically, several studies investigated the effect of positive emotions on cognitive organization, problem-solving, and decision making. The findings suggest that when people are experiencing positive emotions, they demonstrate broadened thinking by associating more unusual words with neutral words, and group more stimuli together (suggesting positive emotions are linked with processing material in a more integrated fashion); flexible thinking and creative problem-solving; and more conservative and self-protecting behaviors when meaningful loss is likely.

Although the role of positive emotions in cognitive processes (e.g., own-race bias) is still being studied, much of the focus is now on promoting well-being. Again, Fredrickson is at the forefront. In 1998, Fredrickson and Levenson tested the hypothesis that contentment and amusement speed recovery from the cardiovascular symptoms of negative emotions (i.e., elevated heart period, pulse transmission times to the ear and to the finger, and finger pulse amplitude). In the first study, 60 female undergraduate students were first shown a film-clip eliciting fear and then randomly assigned to view a second film-clip eliciting contentment, amusement, neutrality, or sadness. Compared with students who viewed the neutrality or sadness film-clips, those who viewed the films eliciting positive emotions demonstrated significantly faster returns to pre-film levels of cardiovascular reactivity. In the second study, 72 individuals between the ages 20 and 35 viewed a film-clip known to elicit sadness. Participants' behavior was analyzed and coded for the occurrence of smiles. The 50 participants who spontaneously smiled at least once during the sad film returned to their pre-film levels of cardiovascular reactivity faster than those who didn't smile. Spontaneous smiling speeded recovery to pre-film levels of reactivity. Negative emotions, with their link to specific action-tendencies (e.g., fight or flight), consistently trigger cardiovascular activation (e.g., increased heart rate and blood flow to the muscles). Certain positive emotions, in contrast, may reduce this cardiovascular activation. This undoing effect of positive emotions will likely bring the organism back to prior levels of physiological activation and increase psychological openness to numerous action tendencies.

In 2000, Fredrickson, Mancuso, Branigan, and Tugade replicated—and extended—the undoing effects of positive emotions. In the first study, 170 undergraduate students were told they had 60 seconds to prepare a 3-minute speech on a to-be-determined topic. While no one delivered a speech, the goal of the experimental manipulation was to induce anxiety. Students

were then randomly assigned to watch 1 of 4 emotion eliciting film-clips: contentment, amusement, neutrality, or sadness. Again, compared with the neutral or sad films, the positive emotions films produced faster cardiovascular recovery. One could argue, however, that the positive emotions don't undo the cardiovascular reactivity of negative emotions, but instead simply replace the cardiovascular reactivity of negative emotions. The undoing hypothesis states that positive emotions produce specific cardiovascular activation only *after* negative emotions have already caused cardiovascular activation. The replacement hypothesis states that positive emotions—produced after either negative *or* neutral emotion induction—cause their own unique cardiovascular activation. To test the undoing versus replacement explanation, in the second study, 185 undergraduate students viewed the same films as in study 1 after a neutral state. Results confirmed the undoing effect of positive emotions. The positive and neutral films produced statistically indistinguishable cardiovascular activation. Together, these studies suggest that positive emotions may help promote well-being by reducing the psychological and physical strain associated with cardiovascular activation, as well as the broadened mindset promoted by positive emotions, which is essential for building physical, intellectual, and social resources.

Fredrickson and Joiner tested if positive emotions triggered upward spirals of well-being. Using the broaden-and-build theory of positive emotions as a framework, they predicted that positive emotions and broad-minded coping (i.e., measured by items such as, “Think of different ways to deal with the problem,” and “Try to step back from the situation and be more objective”) would reciprocally and prospectively predict each other. One hundred and thirty-eight undergraduate students completed measures of positive emotions, negative emotions, and broad-minded coping at two time points 5 weeks apart. Initial positive emotions, and not negative emotions, predicted enhanced broad-minded coping 5 weeks later. Initial broad-minded coping predicted enhanced positive emotions 5 weeks later, but not reductions in negative emotions. Furthermore, initial positive emotions predicted positive emotions 5 weeks later partly because of increases in broad-minded coping during the 5 weeks. Initial broad-minded coping predicted broad-minded coping 5 weeks later partly because of increases in positive emotions. Overall, these findings suggest that positive emotions and broad-minded coping mutually build on each other. Positive emotions thus feel good in the present, but also increase the chances of feeling good in the future.

In 2003, Fredrickson, Tugade, Waugh, and Larkin found that gratitude, a particular positive emotion, was the second most commonly experienced emotion in the wake of the terrorist attacks on September 11, 2001 (out of 20 emotions, only compassion was more common). They found evidence that the experience of positive emotions helped resilient people actively cope with the tragedy. Mirroring this work in children, Gordon, Musher-Eizenman, Holub, and Dalrymple conducted a subsequent archival study of newspaper accounts about what children were thankful for before and after 9-11. It produced further evidence that gratitude plays an important role in coping—and for children as well. Themes of gratitude for basic human needs (i.e., family, friends, and teachers/school) increased after 9-11. Evidence suggests, therefore, that gratitude may be a powerful positive emotion for coping with adversity.

The research produced by Isen, Fredrickson, and colleagues strongly suggests that positive emotions are a good thing. They lead to more flexible and creative thinking and, over time, build enduring physical, intellectual, and social resources. Thus, the broaden-and-build theory of positive emotions provides a framework from which we can explain the link between positive emotions and subsequent goodness, resilience, growth, generativity, and longevity.

Future Directions

Moving beyond the investigation of cognitive processes and into human flourishing will likely continue to be the research focus for positive emotions. This makes sense, since some argue that well-being interventions and positive psychotherapy are the most practical tools provided by positive psychology. Furthermore, with global well-being becoming a mainstream concern within the last decade, investigating the role of positive emotions in the functioning of nations around the world is becoming increasingly important. Therefore, it's likely that most positive emotions research in the future will be aimed at addressing the question: How can we help people achieve sustainable well-being? What are the mediators for this augmentation? As has been shown with adults, counting blessings leads to positive emotions because of an increase in gratitude. What are the moderators for this augmentation? For instance, visualizing best possible selves seems to be an engaging strategy for young adults to become happier, while counting blessings may be more effective in older adults. Age, in this example, seems to matter. Furthermore, what are the specific positive emotions produced by these happiness-boosting interventions, and what are their links to specific life outcomes? Complicating matters even more, Rozin and Royzman state that the determinants of positive emotions are more idiosyncratic compared with negative emotions. Therefore, augmenting positive emotions will not likely be a "one size fits all" solution. Rather, much time may be needed to tailor specific interventions for specific people. (This may explain why augmenting positive emotions in the laboratory seems to be comparatively more difficult than reducing negative emotions; it's also the inherent difficulty of making public policy that's aimed at augmenting citizens' well-being)

With the growing field of positive developmental psychology, the following questions should be addressed: What environmental factors facilitate and inhibit specific positive emotions? Who experiences which positive emotions the most, and why? Why do some people seem to have all of the ingredients to experience positive emotions and don't experience them? Why do some people seem to have a few of the ingredients to experience positive emotions and do experience them? Answering these and similar questions may help us to elucidate the well-springs of positive emotions, as well as develop a better understanding of the mechanisms, processes, and outcomes.

Finally, assessment, statistical analyses, and theories for positive emotions have improved. But more work is needed. First, we need to move beyond the traditional self-report measures of positive emotions. For instance, in addition to using self-report measures, researchers now include behavioral measures of gratitude (e.g., distributing resources between partners as indicating prosocial behavior). Furthermore, according to Isen and Erez, we can also use conceptual validation, converging operations, discriminant validation, implicit measures, and investigate if the obtained results with the chosen operation are compatible with theoretical expectations. Second, advanced statistics such as growth curve analysis, latent class models, and those designed specifically for testing intraindividual differences (e.g., P-technique factor analysis) should be used. These will allow us to better understand the intricacies of positive emotions. Finally, Fredrickson significantly advanced the study of positive emotions with her broaden-and-build theory of positive emotions. Theories now need to be created for discrete positive emotions. Some of this work has already begun. For instance, in relation to gratitude, McCullough, Kilpatrick, Emmons, and Larson extensively reviewed the literature in developmental, evolutionary, social, and personality psychology. They proposed that gratitude serves three moral functions. As a *moral barometer*, gratitude signals the beneficiary that a benefactor bestowed a gift upon him. As a *moral motive*, gratitude encourages prosocial behavior in the beneficiary either directly towards the benefactor or others. Finally, as a *moral reinforcer*,

gratitude increases the probability that the benefactor will act prosocially toward the beneficiary in the future. Fredrickson's theory provides a solid framework for positive emotions in general. But since theory and research serially influence each other—and some positive emotions seem to serve specific functions beyond simply broadening one's thinking and building one's thought-action repertoires—specific theories for some of the specific positive emotions might further the field of well-being.

SEE ALSO: Broaden and Build Theory of Positive Emotions; Happiness; Eudaimonia; Hedonics; Positive Affectivity