

# Emotion in Later Life

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## Abstract

Recent research investigating emotion in old age suggests that autonomic responsiveness diminishes with age. The experiential aspects of emotion, however, show less marked age differences. Despite the health-related and social losses of old age, research findings on changes in the frequency and valence of affect in old age are inconsistent, and those studies that have reported changes have found only small ones. Studies of emotion regulation have found evidence of increasing self-regulatory skill with age. Theoretical accounts of emotional development in late life emphasize the integration of cognitive and affective processes, but differ in whether accommodative mechanisms are considered to be as effective as proactive mechanisms in reaching emotional goals.

## Keywords

emotion; old age; self-regulation; positive feelings

The long period of human development and aging offers the opportunity to examine emotion in terms of two processes: the maturation and aging of the nervous system and the processes of learning and adaptation that occur over many years. Basic sensory and some cognitive processes do change in concert with the aging of the nervous system. In the history of gerontology, it has often been assumed that the declines in psychomotor speed and information processing associated with aging are

paralleled by declines in other functions. Almost invariably, however, empirical testing has shown these folk-wisdom-generated assertions to be either false or true under very limited conditions. This is true of several common beliefs about emotion and aging. In this article, I review changes in emotion across the life span. My focus is on the autonomic, facial-expressive, behavioral, and subjective aspects of emotion (genetic and neural aspects are not included). I end the discussion with brief overviews of some recent theoretical contributions regarding the role of emotion in adult development.

## AUTONOMIC AND FACIAL-EXPRESSIVE ASPECTS OF EMOTION

In empirical studies, psychophysiological and facial emotion, which are linked to the biological substratum of emotion, have shown age-related changes. In one study, older and younger participants showed similar emotion-specific patterns in four physiological functions during directed facial emotion-simulating action, but the levels of autonomic activity were lower among the older adults (Levenson, Carstensen, Friesen, & Ekman, 1991). Levenson et al. viewed the two age groups' similarity in the differential autonomic configurations for anger, fear, and other emotions as evidence in favor of the continuity of emotional responsiveness over the life cycle. In another study with an experiential focus, however, older participants reported fewer autonomic symp-

toms accompanying typical emotion than did middle-aged and younger people (Lawton, Kleban, Rajagopal, & Dean, 1992).

Facial expression has long been identified as an intrinsic aspect of emotion with close ties to the neurology of emotion. There are two sides to facial expression: the ability to display (encode) facial expressions that can be decoded by other people, which is referred to as emotion expression, and the ability to decode other people's facial expressions, which is referred to as emotional understanding. Emotional understanding is a step further removed from brain processes than emotion expression, but both forming a facial expression and understanding the facial expression of another person are communicative acts that are subject to social learning and personal control. Empirical evidence is not consistent, but some research has found that older people are less able than younger people to encode and decode facial expressions in accord with expectations (Levenson et al., 1991; Malatesta, Izard, Culver, & Nicolich, 1987); also, elders may be better able to decode expressions of their own age-mates than those of younger people.

## EMOTION, BEHAVIOR, AND SUBJECTIVE EXPERIENCE

### Affect Salience

Malatesta and Kalnok (1984) used a self-response questionnaire to explore whether people of different ages differ in their perception of how central emotion in general is to their overall functioning. Young people saw emotion as more central to their lives than did middle-aged and older people, who did not differ from each other in their reports. Malatesta and Kalnok found no age differences, how-

ever, in participants' use of emotion terms in describing significant events, and similarly, no age differences were found in another study using an incidental memory task that provided an opportunity for either neutral or emotional information to be recalled (Carstensen & Turk-Charles, 1994).

### Affect Frequency

Old age has often been thought of as a period of loss and decline. In fact, a steady stream of research beginning with small or unrepresentative samples but now including very large and sophisticated samples has led to the conclusion that life satisfaction is higher among older than among younger people and that the frequency of negative affect does not conform with the "age of loss" hypothesis. Cross-sectional studies suggest that young and old people do not differ in the frequency with which they experience negative affect, although positive affect appears to become less prevalent with age (see, e.g., Costa et al., 1987; Stacey & Gatz, 1991). The complexity of the relationship between emotion and age is evident in data from a recent study (Kunzmann, Little, & Smith, in press): Initial analyses indicated that negative affect was higher with age and positive affect lower, but once functional health was statistically controlled, negative affect was lower and positive affect was higher with increased age.

There is less evidence that the valence of affect changes with age when affect is measured longitudinally than when it is measured cross-sectionally. In 9-year and 14-year longitudinal studies (Costa et al., 1987; Stacey & Gatz, 1991), older people's negative affect did not change, nor did negative affect in very old samples change over 4 years (Kunzmann et al., in press). Costa et al. similarly reported no

9-year change in positive affect among older people, although Stacey and Gatz found a decrease in positive affect after 14 years for people ages 65 and older. Further, when Kunzmann et al. differentiated the very old from the oldest-old, they found a longitudinal decline in positive affect in the oldest group only.

Many uncertainties remain. The foregoing studies illustrate the dependence of some findings on the age range studied; "the aged" who are 60 to 69 years old clearly differ from those who are 80 and over. The study by Kunzmann et al. (in press) illustrates the critical position of health, yet the growing probability of poor health as age increases makes the statistical separation of age and health somewhat specious.

### Affect Intensity

Given age-related changes in health, vigor, and nervous system functioning, it has seemed almost self-evident to some observers that the experienced intensity of emotion would also decline with age. A possible counteracting force, however, might come from the subjective and, possibly, self-constructing nature of the experience of intensity; felt intensity is certainly more than simple recognition of autonomic or motoric aspects of emotional arousal.

Here again, empirical evidence is very mixed. Comparisons of older and younger people's self-assessments of their experienced emotion showed that older people rated their own affects as being less intense and themselves as less moody, lower in sensation seeking, and more likely to experience a leveling of positive affect (Diener, Sandvik, & Larsen, 1985; Lawton et al., 1992). In other studies in which emotion was induced and rated on the spot, however, no age differ-

ences in intensity were reported (Levenson et al., 1991, in their re-lived-emotion task; Malatesta et al., 1987). Studies of observer-rated affective responses in real-life situations are clearly needed.

### Emotion Regulation

The relationship of emotion to other psychological processes is acknowledged particularly well in the concept of emotion regulation, which may be defined as modification (by either active or passive means) of the eliciting conditions of emotion, its subjective experience, or the behavior associated with it in such a way as to optimize some personal goal. Regulation thus may be imposed on the neural, sensory, cognitive, behavioral, and environmental systems. Regulation in particular seems to be a skill that might change with age, as a result of learning, practice, selective reinforcement, and personal preference exercised over a lifetime. Seen in this light, phenomena such as diminished autonomic arousal, less efficient facial responsiveness, and diminished intensity of affect could be interpreted as resource-conservational moves appropriate to a time of life when biological resources are diminishing. Some research has demonstrated that perceived control of emotion and affect regulation become stronger with age (Gross et al., 1997; Lawton et al., 1992).

## THEORETICAL ACCOUNTS OF EMOTION IN ADULT DEVELOPMENT

In this section, I discuss four theories of emotion in adult development. They all share some recognition of the essential oneness of the psychological processes that play a role in emotion, and in particular reflect the fact that cognition is in-

separable from emotion. All emphasize to some extent the individual's active shaping of emotion in the service of personal goals.

### **Control Theory of Late-Life Emotion**

Schulz and Heckhausen (1998) have offered a control theory of late-life emotion. Their evolutionary theory is largely a cognitive-behavioral model in which achievement of primary control is the major goal at every life stage. Primary control is exerted when the environment and the self are managed actively to satisfy personal goals; in contrast, secondary control is directed toward changing thoughts and goal-seeking behaviors when primary control is not achievable. Within this framework, emotion is viewed as motivating and providing feedback on efforts toward establishing primary control. Affective goals are thus primarily means rather than end points. Specifically, counteracting negative emotions is a by-product of primary control, but diminished negative emotions and the experience of positive emotion are seen as a way of recharging "the motivational resources . . . so that other control-related goals might be pursued" (Schulz & Heckhausen, 1998, p. 192). In this framework, research demonstrating that emotion regulation becomes stronger in old age is seen as consistent with the age-related loss of primary control and compensatory efforts to preserve the self through secondary control.

### **Integration of Cognition and Emotion**

The other three perspectives suggest late-maturing processes that are parallel to the successful striving modes of earlier life, modes that represent growth rather than retrogress-

sion. Labouvie-Vief, Hakim-Larson, DeVoe, and Schoeberlein (1989) maintained that cognitive and affective processes develop separately, and that development of both kinds of processes continues in successive stages throughout the total life span, at each step building on earlier developmental phases. The final stage of the maturing process in late middle age is characterized by complete integration of cognitive and affective functions; that is, each function has free expression within the constraints of higher-level integration with the self. In earlier phases, either cognition and emotion are incompletely controlled by the self or they are externally controlled. The achieved integration of cognitive and affective functions in later life facilitates both experienced emotion and social behaviors in ways that are more complex and realistic, but still fulfilling.

Although Labouvie-Vief's perspective puts cognitive function developmentally ahead of affect, her most mature stage reflects total equality—indeed, unity—of the two. Blanchard-Fields (1998) has also been concerned with the relationship between these spheres over the life span and with their contribution to social judgment. Older people, more than younger people, appear to utilize emotion-based judgments in social decision making, a propensity that she sees as adaptive and reflective of an increased ability to deal with uncertainty and complexity in social relationships during later life. This ability to integrate emotion and cognition gives greater range for elders to use accommodative strategies, when direct problem solving (assimilation) would prove to be a suboptimal strategy and particularly when social goals may be increasingly salient. One result is that emotion may act as an intrusive element in social decisions among developmentally immature people but as a source of differenti-

ation among social situations for mature people.

Carstensen's socioemotional selectivity theory (1995) also focuses on emotion and cognition in the domain of social relationships. In her work, she has searched for an explanation of the decline of social activity with age, which she sees as reflecting changes in goals with age. The young value the knowledge-acquisition functions of social relationships, but as people grow older, they move toward valuing more highly the emotional rewards of social relationships. As time goes on, the present is composed more and more of short-term emotional social rewards. Social choices are made increasingly selectively with these rewards in mind, and with less emphasis on the novelty and stimulation of new social relationships. Thus, later life is characterized not by either diminution of affect or lowered intensity of affect, but rather by greater selectivity in the objects or goals toward which emotion regulation is directed.

## **CONCLUSION**

Although evidence is sketchy now, it seems likely that age-related cognitive decline has an analogue in the domain of emotion at the levels most closely associated with the biological substratum (i.e., autonomic and facial-expressive aspects of emotion). At more complex levels of affective function, there is compelling evidence that older people continue to direct their own affective lives as they do other sectors of their lives. There is little evidence of affective loss at the subjective level, although theories differ in whether they attribute this continued high level of functioning to a new level of maturity, regulation of affect, or compensatory behavior.

Older people perceive themselves as being more effective than they were earlier in their lives in a variety of types of emotion regulation. However, because regulation has been operationalized differently in different studies, understanding of the actual processes of regulation has not been very well advanced. Until these processes are specified better and distinguished in terms of the relative contributions of passive, or accommodative, versus proactive management practices to the forms of emotion regulation, we will lack knowledge regarding a central component of the developmental psychology of affect.

Recent research on age and emotion thus contradicts stereotypes of older people as affectively blunted and particularly as depressed by illness and losses. The knowledge that older people actively construct their own socially meaningful and productive emotional worlds adds to the picture of old age as a time of continuing independence and fulfillment. Like everyone else, they experience good and bad moods, but in no way do they feel selectively powerless or defeated. Because they have purposefully achieved emotional maturity, they clearly can teach us lessons that are applicable to human development at any stage.

Theorists must find ways to incorporate better the concept of quality of life into their structural models of emotion. The dynamics of

both human development and the ecology of affect now require elaboration so that we may better understand how the mix of affect states in older people can be optimized—through self-help efforts of older people themselves, interventions undertaken by professionals, and social policy.

### Recommended Reading

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### Note

1. With deep sadness, we regret to report that M. Powell Lawton passed away on January 29, 2001.

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