

Old and grumpy? You may be blind to a smile

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The value of recognising emotions may change over the course of our lives, a study suggests

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Smile and the world smiles with you. But if you can't see the world smiling, then it might be because you're elderly.

Research has found that older people are less able to spot the friendly faces of those around them. And if the world conversely seems more threatening to them, then that might also be explained by the fact that not all their emotional recognition is affected by age: their powers to discern an angry frown remain undimmed.

The study suggests that the evolutionary value of spotting different emotions may change over the course of our lives — and that while it can be useful for young people to see a potential friend, older people are far more interested in avoiding enemies.

To investigate the phenomenon, Japanese researchers took 30 people with an average age of 21, and 30 people with an average age of 72, and asked them to classify the emotions on different faces. Some of the expressions were angry, some were sad and some were neutral. They found that the young people were quicker at detecting both happy and angry faces compared with the neutral ones. This makes sense: humans are social animals, for whom understanding emotions is crucial. Older people's reaction times were slower for all faces, as you might expect. However, there was also a different pattern. The research, published in the peer-reviewed journal *Royal Society Open Science*, found that older people were no better at classifying neutral faces compared with happy faces — the happiness of other people seemed to have lost its significance. When it came to anger, however, they stayed attuned.

The scientists, from Kyoto University, suggested that one explanation could be that old people had less evolutionary interest in making new friends, but still retained a strong interest in staying alive.

“The rapid detection of threatening, angry faces enhances survival by allowing a person to avoid physiological and psychological harm,” they wrote.

“It is reasonable to assume that superior detection of angry compared with happy faces reflects innate self-preservation.”

In contrast, spotting happy faces “might be particularly important in young adults, who are assumed to want to build and expand social relationships. When establishing new relationships is important, it is natural to focus on happy faces, because these indicate how one might advance one's social career or social status.

“Conversely, if establishing new social relationships is not important, subjects may sometimes ignore happy faces. Ageing is characterised by declining health and shrinking social networks. Happy faces may not motivate the aged; they do not impart useful life clues.”

However, just because the brain does not automatically spot happy faces in the way it used to, that does not mean that older people do not personally welcome a friendly face.

This is why, the researchers argue, the findings might have societal relevance.

They said: “It is possible that weakened automatic detection of happy faces among older adults would affect their day-to-day social activities; older adults may have difficulty detecting and focusing attention on smiling faces. This has practical implications for caring for older patients; carers of older patients should consider the possibility that their patients might only poorly detect peripheral smiling faces.

“Clinical studies on the care of older patients have found that smiling with eye contact improves the quality of carer and cared interactions in caring settings. Our results suggest that the beneficial effects of happy facial expressions may be reduced if carers are seen only peripherally by those for whom they care.”