

A GOOD CRY

Turning on the waterworks could work to our advantage, if only we knew when, how and why, says Sonia van Gilder Cooke

BRITISH tennis player Andy Murray knows what it's like to be unpopular. Early in his career, his aloofness and volatility on the court left many with the impression that he was petulant, spoiled, even unpatriotic. Then came Wimbledon 2012, and a gruelling final against six-time champion Roger Federer. After Murray lost, he took the microphone to thank his fans. He quavered, tried to speak and stopped to wipe away tears. In that moment, Murray won over the British public. "It took me crying at Wimbledon," he later acknowledged.

But tears can have the opposite effect. In 1972, they were the undoing of US Democratic presidential hopeful Edmund Muskie. He was his party's front runner at first, but his campaign fell apart after he was accused of crying while addressing the press to defend his wife's reputation. He claimed the moisture on his face was melting snowflakes – the event took place outdoors in a blizzard – but to no avail. His image as the candidate of calm and reason was shattered.

That crying can change people's fates is beyond doubt; history is full of examples. But why tears can have such a far-reaching effect is not obvious. "If you compare tearful crying with other emotional expressions, very little is known," says psychologist Asmir Gracanin at the University of Rijeka, Croatia. What we do know is that emotional crying is downright weird. Many animals produce tears to protect their eyes, but humans alone cry out of feeling. And we cry not only when we're sad, but also when we're happy, overwhelmed, enraptured and in pain. Why do we do it? What are the benefits of blubbing? More pointedly, when should you keep a stiff upper lip, and when might it help to turn on the waterworks?

People have long puzzled over crying.

Aristotle purportedly viewed tears as an excretion like urine. "That they are of one nature is plain to the taste," he is reported to have said. Reflecting this idea, in the 1940s, American psychoanalyst Phyllis Greenacre suggested that female weeping was a symptom of penis envy – a way for a woman to imitate a man urinating. Less provocatively, Darwin concluded that, in addition to lubricating the eye, tears "serve as a relief to suffering", although he didn't explain exactly how.

The idea that crying is cathartic remains popular. But what does that even mean? For Freudians it suggests the release of pent-up emotions – the principle behind folk wisdom encouraging people to "let it out". Another interpretation is that crying rids the body of harmful chemicals, such as stress hormones, produced by emotional distress. This theory dates from the 1980s, when biochemist William Frey found that tears of emotion were richer in protein than non-emotional tears. But Ad Vingerhoets at Tilburg University in the Netherlands is dubious, having twice tried and failed to replicate this finding.

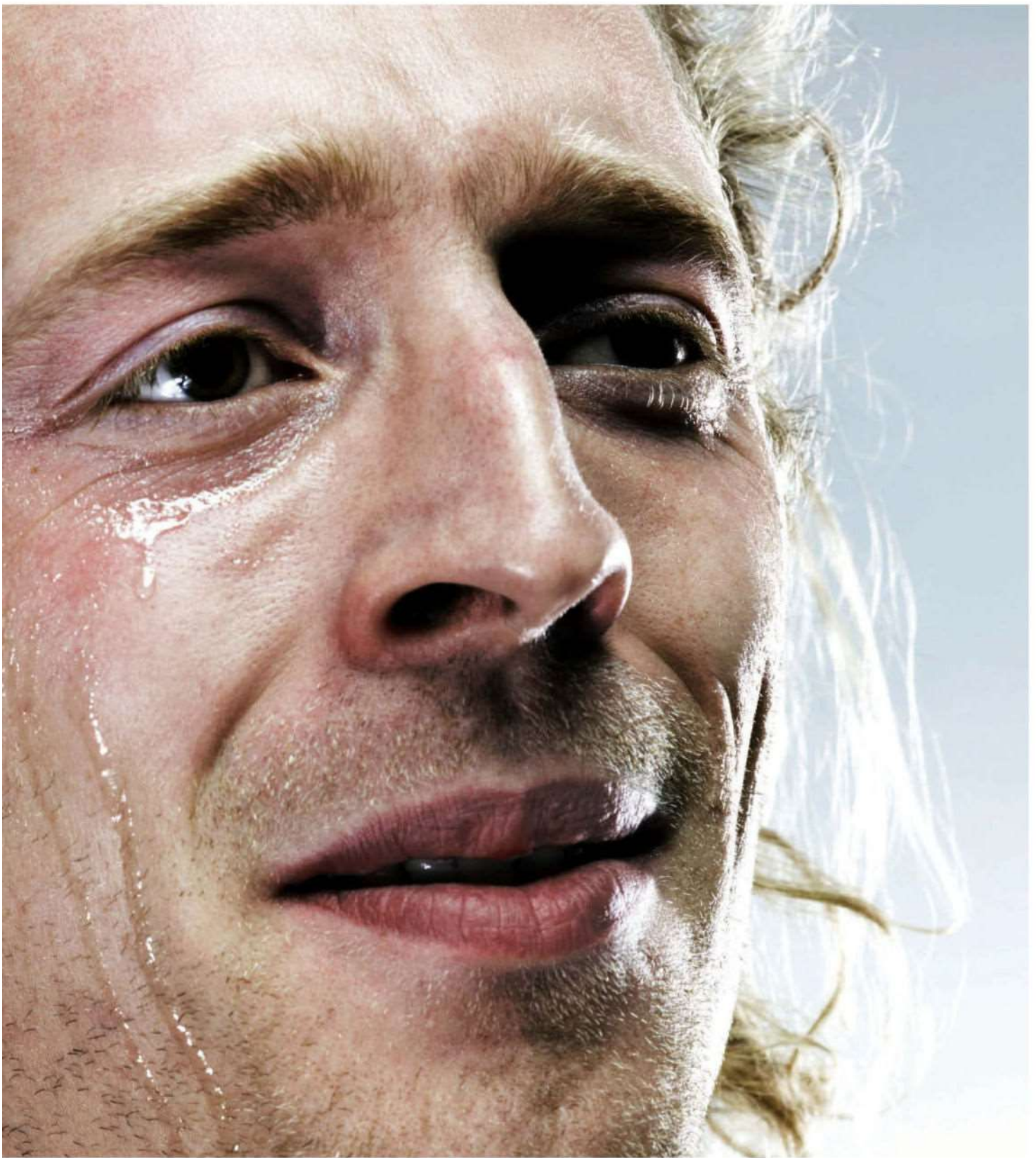
The myth of catharsis

Like other bodily fluids, tears tend to reflect the composition of the blood, he notes, but that doesn't mean their function is to purge the blood of certain substances. "We would never say that after having drooled, we feel better," he says. Besides, the average cry only produces around a millilitre of tears.

So why do many people say that crying makes them feel better? One possibility, says Gracanin, is that it's just that misery doesn't last for ever. Our mood improves by the ➤



BRAND NEW IMAGES/GETTY



time we've finished crying, even if it's just returning to normal from rock bottom. There is also some evidence that crying relaxes the body by activating the parasympathetic nervous system, or by pumping up levels of oxytocin, the "cuddle hormone". Gracanin is investigating these possibilities, but says that even if the effects are genuine, the reason we feel better may be something other than tears. "We still don't know," he says.

Could crying have another purpose? These days, most researchers believe its function is not physiological, but social. "If you cry, you send a signal that you need help," says Gracanin.

At first glance, liquid dripping from the eyes is a strange signal of helplessness, but neuroscientist Robert Provine at the University of Maryland, Baltimore County, thinks he knows how it evolved. Many animals

became worth our while to shed tears over any hurt, physical or mental.

Still, why did the eyes become the channel for signalling distress, and not sweaty palms or pale lips? The eyes are perhaps the best clue we have to what others are thinking, Gracanin points out, so we are predisposed to look at them. You can also generally count on eyes to be visible. "They are a quite nice place to put a signal, as opposed to some other body part," he says.

And what a signal: Martijn Balsters at Tilburg University has found that the presence of tears on sad faces that volunteers saw for just 50 milliseconds boosted feelings of sympathy, supportiveness and friendship towards the individual pictured. Tears also help us overcome feelings of revulsion. Dennis Kuester at Jacobs University in Bremen, Germany, showed people pictures of injured faces, with and without tears, and measured the action of the levator labii, a facial muscle closely associated with expressions of disgust. Faces with tears provoked less revulsion than ones without them. "Tears really show that someone is in need of support, of empathy, of help, and that you should approach that person, even if there are some signs of injury," says Kuester.

One reason crying affects us so strongly is that, as many actors know, it's hard to fake. "It is considered an 'honest' signal, which makes it really powerful," says Vingerhoets. Provine agrees. "The ability to shed and respond to tears of emotion is important in the evolution of empathy," he says. Tears, it could be argued, bring out the best in us.

We view tears more sympathetically in powerful people and those seen as having earned the right to cry (below)



JIM WATSON/AP/GETTY IMAGES

"One reason crying affects us so strongly is that, as many actors know, it's hard to fake"

clean their eyes and reduce irritation by secreting tears from the lacrimal glands, above the outer corner of each eye. Provine believes that as humans evolved, tears acquired a second role. "If someone has injured their eye or is suffering from disease, others might comfort or assist them," he says. "And after that, the presence of tears emerged as a cue for caregiving." In other words, once crying started to elicit help from others, it

But it's also clear that our reactions to crying depend on a lot of factors, not least the sex of the person crying – although not necessarily in the way stereotypes might dictate. For example, psychologists Heather MacArthur and Stephanie Shields of Pennsylvania State University presented subjects with scenarios in which both men and women in the roles of nurse and firefighter broke down in tears while trying to help an injured person. The

A VERY PECULIAR PRACTICE

Look closely at crying, and you will see just how strange it is. For one thing, it encompasses two very different processes: vocal wailing and tearing.

Human babies excel at the former, and for good reason – bawling is a very effective way of getting attention from caregivers. For their first few weeks, babies don't even shed tears, because their tear glands are still developing. But as they grow, crying becomes less vocal and more tearful.

This could be an evolutionary adaptation, suggests Ad Vingerhoets at Tilburg University in the Netherlands. Wailing advertises vulnerability to everyone around,

including predators, so once a child can move around, it is wiser to use the more covert signal of tears.

Another puzzle is that we cry throughout our lives. Intriguing changes in crying behaviour seem to reflect its changing functions as we age. Around adolescence, we begin to cry less over physical pain and more over emotional pain. Many people also start to exhibit "moral crying", in reaction to acts of bravery, self-sacrifice and altruism. Why we do this is still a mystery.

Also mysterious is why, as we age, we increasingly shed tears over things that are positive. Robert Provine at the University of Maryland, Baltimore

County, has a suggestion. "Given that emotional tearing is recently evolved, it's a very crude estimate of emotional expression," he says. "We also produce tears when we yawn, when we sneeze, when we laugh, when we cough."

Another theory is that so-called tears of joy do not actually reflect happiness at all; events such as weddings and holidays are often bittersweet because they remind us of the passage of time and mortality. This may be why children usually do not cry out of happiness: they don't yet make the associations with sacrifice, loss and impermanence.

Then there's the question of why

some people cry more than others. In a recent review of research, Vingerhoets reported that neurotics and people who are highly empathic cry the most. The former use tears manipulatively – as do narcissists, psychopaths and tantrum-throwing toddlers. Sociopaths are thought most likely to cry fake or "crocodile" tears.

And, although boys and girls cry frequently until puberty, in Western cultures women cry at least twice as often as men. Men are culturally conditioned to restrain their tears, but there may be more to it than that. Studies in animals suggest the hormone testosterone might have a tear-suppressing effect.



participants were then asked to rate the masculinity of the person who cried and the acceptability of crying. The firefighters were generally considered more masculine, whatever their sex.

Given the popular association between femininity and emotional display, you might think that crying by those in the more stereotypically feminine role of nurse would be more acceptable. In fact, the researchers found the opposite. "The more masculine people perceived the crier to be, the more they thought their tears were appropriate to the situation," says MacArthur. "It didn't matter whether that firefighter was female or male."

Doing a stereotypically masculine job may give you more of a licence to cry, whatever your sex, but being female means you are more likely to be comforted when you cry. This may have an unexpected explanation rooted in how tears alter our looks. Kuester showed a series of computer-generated neutral faces of ambiguous gender to volunteers, asking them to rate how masculine or feminine these looked with and without tears. His hypothesis was that adding tears to faces would make them look more feminine, given that stereotypes link tears and femaleness.

To his surprise, male respondents thought that tears made faces look more masculine. In another experiment, using faces with a range

of ages, Kuester found that men perceived tears as making faces look younger. In light of these findings, he speculates that tears may help protect women from inappropriate male advances and aggression. "When a woman is crying, it suggests to the male that, OK, now this is not a sexual object, but someone who needs help," says Kuester.

Men may not be sending out the same signals when they cry and, in many cultures,



BACK PAGE IMAGES/REX/SHUTTERSTOCK

they are under pressure to suppress their emotions. But these may not be as strong or pervasive as we tend to think. MacArthur and Shields looked at crying in the domain of men's competitive sport and found that far from being a place of "manly" restraint, sport provides a safe arena for displays of feeling, including cheering, crying and hugging, among fans and players. In the sporting context, "emotion widely believed to be 'unmanly' is allowed", they write.

"Crying in men isn't just acceptable, sometimes it can be downright desirable"

What's more, crying in a man isn't just acceptable, sometimes it can be downright desirable. In another study, Shields and colleagues found that participants rated men who showed intense yet controlled emotion in a sad situation as more competent than those who showed no emotion at all. "Such displays convey that men are human, feeling beings," the researchers conclude. The finding doesn't surprise Thomas Dixon, director of the Centre for the History of the Emotions at Queen Mary University of London, and author of *Weeping Britannia*. This take on manliness has appeared time and again throughout history, he says. "People have argued that crying shows that you are not only strong and rational, but also feeling, and that that's the ultimate kind of masculinity."

Although crying is still full of mysteries (see "A very peculiar practice", far left), its benefits are becoming clearer. "Showing your vulnerability is sometimes very positive," says Vingerhoets. But tears must be used wisely. "How positively tears are viewed depends on what you're crying about – it has to be perceived as something important, and not your fault," says Shields.

How you cry is also crucial: welling up usually makes a better impression than open weeping. Ironically, the powerful are more often admired for their tears than the weak. "The individual who would be most sympathetically seen would be somebody who has earned the right to cry via status," says Shields. That might help explain why Murray has gone from being considered spoiled and petulant to a two-time winner of the BBC Sports Personality of the Year award. "Crying changes everything," says Provine. ■

Sonia van Gilder Cooke is based in London, UK