Students with more autistic traits make fewer altruistic choices

Most people with autism have difficulties socialising and connecting with others. It's generally agreed that part of this has to do with an impairment in taking other people's perspective. More specifically, an emerging consensus suggests that autism is associated with having normal feelings for other people, but an impaired understanding of them. Little explored before now is how this affects the behaviour of people with autism towards others who need help.

Leila Jameel and her colleagues surveyed 573 students using the 50-item Autism-Spectrum

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Quotient, which is a questionnaire designed to tap key traits associated with autism spectrum disorder. Then they asked 27 of the top 10 per cent of scorers and 24 of the bottom 10 per cent to complete a new test of prosocial behaviour known as the Above and Beyond Task.

The participants read scenarios that conflicted another person's needs with their own. They first stated how they would act in this scenario, and then they chose from three fixed alternatives, ranging from selfish, to medium prosocial, to high prosocial (or 'above and beyond'). For example, one scenario involved seeing a man fall in the street while the participant was rushing to work for a meeting. After giving their own response as to how they would react, the three fixed options were: carry on walking; help him up and carry on walking; help him up and offer to take him to sit down on a nearby bench.

High scorers on the Autism-Spectrum Quotient more often chose the selfish, low prosocial options and less often chose the high prosocial options, as compared with low scorers on the questionnaire. The high scorers also gave more selfish open-ended answers when first asked how they would respond to each scenario.

Another measure was how satisfied the participants thought they would be with their chosen course of action, and how satisfied the needy person in the scenario would be. The high and low scorers on the Autism-Spectrum Quotient did not differ in their ratings of the needy person's satisfaction with the different response options. However, the high scorers tended to say they personally would be more satisfied after making more selfish choices, and less satisfied after more altruistic choices.

This is a sensitive topic. If misinterpreted or oversimplified the findings risk bolstering the stigmatisation of people with autism. It's important to realise that the study did not involve people diagnosed with autism, but rather a 'sub-clinical population' (in the researchers' words) who scored highly on a self-report measure of autistic traits. Moreover, the study did not involve real-world helping behaviour. It was based on hypothetical scenarios, which raises problems of interpretation. For example, perhaps people with more autistic traits are simply more honest about how they would behave. Perhaps they find it difficult to, or choose not to, treat the fictional character as they would a real person.

With these caveats in mind, these results hint tentatively at how autistic traits could affect people's helping behaviour in the real world. The researchers also said their new Above and Beyond Task could be used to measure the outcomes of training programmes designed to help people with autism. 'Despite considerable attention to social skills training in people with Autism Spectrum Disorder,' write Jameel and colleagues, 'relatively little is known about the efficacy of such programmes or the key ingredients for success.' CJ

Your angry face makes you look stronger

In *Evolution and Human Behavior*

No matter where you travel, you are likely to have no problem recognising when someone is angry with you. From the plains of Russia to the beaches of Brazil, anger shows itself in a tell-tale facial display involving lowered brow, snarled nose, raised chin and thinned lips.

A popular view has it that, besides reliably conveying anger, this particular constellation of facial movements is arbitrary and serves no other function. A team of evolutionary psychologists led by Aaron Sell disagree. They think the anger face also makes the angry person look stronger. This fits their 'recalibration theory of anger' that sees the emotion as an aggressive threat. An angry animal or person is communicating the costs that they will inflict on others if they do not get what they want. By making an angry person look stronger, so the theory goes, the facial expression gives weight to the threat of aggression, likely influencing the target's judgment about the seriousness of the threat.

To test this, Sell and his colleagues created pairs of faces using a computer programme. They began with a 20-year-old male face, morphed from averages of many faces, and then calibrated it so that for each of the seven distinguishing features of anger (lowered brow, raised lips, raised mouth, widened nose, enlarged chin, lips thinned, lips pushed forward), they created a pair of

The simple piece of information that could dramatically increase your muscular endurance

In *Psychology of Sport and Exercise*

contrasting faces. One face in each pair displayed one angry feature, the other face showed the opposite feature (e.g. one with lowered brows, one raised).

Thirty-five student participants then looked at the facial pairs and indicated in each case which face they thought looked stronger. The key finding? Each anger-related facial feature when displayed on its own attracted higher ratings of perceived strength. This implies each element of the anger expression contributes to making a person appear stronger.

Further experiments ruled out an alternative explanation – perhaps angry faces actually serve to make a person look older, and this leads to ratings of greater strength because observers assume a slightly older man is stronger than a 20-year-old. One way the researchers tested this was to show participants pairs of morphed faces of a 60-year-old man, in which case looking older presumably wouldn't be associated with greater strength. Three of the angry facial features actually led him to being rated as younger, with only two prompting ratings of being older. Moreover, participants rated the man as stronger when he displayed six of the seven angry facial features.

'The current study is the first systematic test of the individual components of the anger expression,' the researchers said. 'And in so doing it confirms that these features are improbably well designed to solve the adaptive problem of bargaining with threats of force.' CJ

How most of us choose to behave is shaped powerfully by the behaviour of others (or, more specifically, our perception of their behaviour). Psychologists call this the influence of 'social norms', and its potency has been investigated extensively in the context of environmentally friendly behaviours like recycling, and health behaviours, such as binge drinking and frequency of exercise.

What if this same psychological lever could be exploited, not to encourage people to take up more physical activity, but to boost their athletic performance? A pair of researchers, Carly Priebe and Kevin Spink, have tested this idea for the first time.

Sixty-eight regulars (average age 40, nine men) at a pilates studio were asked to perform two plank exercises, and to hold each for as long as they possibly could. As a cover story, they were told that the purpose of the challenge was to help find out the average performance level for this exercise.

The plank is a physically demanding exercise that involves adopting a face-down prone position, then raising the body on forearms and toes, and holding this position rigid, parallel to the ground. It was emphasised to participants that they should hold the position for as long as possible on both attempts, and that their times would be averaged.

The participants were given a three-minute rest between each attempt. The key intervention is that between planks, half the participants were given the 'social norms' message that 80 per cent of people similar to them (in terms of age, gender and pilates level) had achieved a 20 per cent longer time on their second effort. The other participants were told nothing of this kind, or anything else (this is a potential weakness of the study, which I'll return to).

The researchers had hoped their intervention, if successful, would lead merely to sustained performance on the second attempt. The rather dramatic result is that participants given the social norms message achieved a 5 per cent increase on their second attempt (first attempt average time was 95.82 seconds; second attempt average was 99.79 seconds). This is dramatic because after performing a first plank to exhaustion, one would typically expect participants' second attempt to be shorter. The control participants, as expected, achieved a significantly shorter time on their second plank attempt (76.38 seconds vs. 90.09 seconds on their first attempt – a drop of 18 per cent).

Priebe and Spink said their findings 'hint at the potency of the descriptive norm information and the potential effects of social influence on physical activity tasks'. Participants in the social norms

condition reported higher 'self-efficacy' (belief in their own ability) than control participants, so this hints at a possible mechanism for the effect of the intervention.

A strength of this research is that the researchers gauged participants' beliefs about other people's performance before presenting them with the social norms message. The majority of participants assumed that most others would decline in performance on their second attempt. This was important to check because past research has shown that social norms interventions can backfire if people hold initial beliefs that exceed the reality of the normative message.

As hinted at earlier, a weakness of the study is the lack of a control condition that communicated a different message to the participants. This means we can't tell how much of the apparent effect of the current intervention was specific to its social norms content. It's possible receiving any kind of motivational message between exercises would have had a galvanising effect. Another problem, of course, is that the social norms message was a fabrication – the participants were effectively fed a lie. It's also not clear how long this kind of intervention could sustain its effects. News of other people's performance might be motivating at first, but could quickly lose its potency, or even become counter-productive. CJ

Reader reactions to news of terrorism

In the Journal of Applied Social Psychology

How readers' emotions are affected by media reports of terrorist attacks depends on the photos used to accompany the story. That's according to an analysis by Aarti Iyer and colleagues, who say these different emotional reactions in turn lead to support for different government policies.

Over 200 British adults (aged 18 to 68; 92 women), many based in London, read a news summary of the London terrorist bombings that occurred on 7 July 2005. Afterwards, the participants were split into two groups – one group was shown photographs that displayed the terrorist attackers, including head-shots and security camera footage. The other group was shown photographs displaying victims of the attacks, including wounded people and distressed bystanders.

Participants who viewed the images of terrorists subsequently reported feeling a stronger sense of injustice (than those who saw the victims), and felt more of a sense that the terrorists were dangerous and threatening. In terms of emotions, viewing the images of the terrorists was associated with higher levels of fear and anger. In contrast, participants who saw the images of the victims were afterwards more conscious of people suffering, and they tended to report feeling more sympathy.

Although a direct comparison found no difference between the two participant groups, in terms of their subsequent support for various government terrorism policies, Iyer and her team claim there were indirect effects of the two image conditions. According to the researchers' analysis, viewing images of the terrorists increased levels of anger and fear, and in turn these emotions were associated with more support for aggressive counter-terrorism and more negotiation, respectively. In contrast, seeing images of victims increased feelings of sympathy, which was associated with more support for policies aimed at helping victims.

'Given that images of terrorism may be easily used (and abused) to manipulate public opinion, it is … vital that media editors and policy makers better understand the psychological processes underlying the phenomenon,' the researchers said. They admitted that much more research is needed, and they acknowledged that in reality readers and viewers are often exposed to a mixture of images. But despite this caution, Iyer and her team also wrote that their findings demonstrate 'the powerful impact of media images in shaping individuals' emotional and political responses to terrorism...'

Readers of a sceptical persuasion may not be so convinced. The path analysis used in this research can only demonstrate correlations between factors, not causality. Ultimately, the two groups of participants did not differ in their support for different government policies. This research was also unable to explain why some people responded to images of the terrorists with anger, and others with fear. **CJ**

The psychology of wearable computing - does Google Glass affect where people look?

In the British Journal of Psychology

Computing eyewear such as Google Glass can record information far more discreetly than a handheld camera. As a result, privacy concerns have been raised: are users of this tech likely to use their new toys responsibly? Early research was promising, suggesting that the very act of recording our gaze may lead us to be extra considerate in where we look. Unfortunately, a new study finds that while wearing gaze-monitoring devices may initially encourage more socially acceptable looking behaviours, the effect doesn't last.

In this experiment 82 participants (aged 18 to 51; 59 women) were secretly monitored as they waited alone after finishing the six-minute computer task they believed to be the purpose of the study. The researchers led by Eleni Nasiopoulos were interested in how much time during the wait the participants spent glancing at the racy pin-up calendar hanging on the wall.

A control set of participants who were not wearing special eye-tracking glasses spent around 80 per cent of the available minute ogling the calendar. Another group were earlier fitted with eye-tracking glasses and knew that their gaze was being tracked by the device. In line with past research, this group used their gaze in a more socially acceptable manner, glancing at the calendar less than half the time. So far, so good.

But the experiment had another preliminary task at the very beginning, in which participants spent five minutes walking the building searching for coloured squares stuck on walls. Some of the participants in the later eye-tracking condition were actually set up with eye-trackers before this initial task, so they had been wearing the glasses for a longer amount of time than the others. Focusing on just these participants, the researchers found their eyes lingered on the calendar for as much time as those in the no-device control group. The longer passage of time and different context appeared to eliminate the social acceptability effect of gaze-monitoring equipment.

Interestingly, those participants who had eye-trackers fitted at the start of the experiment, but who were subjected to a brief equipment recalibration once they had entered the calendar room, did show an effect of the glasses: their calendar perusal was back down to about 45 per cent. This suggests that rather than users habituating to the eye-trackers – meaning that the experience matters less and less until it becomes passé – it's more

about people forgetting that they are in use.

Eye-tracking researchers have argued that users of wearable computing are actually taking along a chaperone, and although it can be a discreet one (putting aside the spectre of hacking hanging over all digital data), the appeal of resharing recorded experiences to social media renders every use as potentially public. This feeling of our gaze being recorded should make us self-conscious and influence our looking behaviour – just as we engage in more approval-seeking behaviours when filmed by a

security camera, despite not knowing if the film will ever be watched, or by whom. But wearable computing isn't 'Out There' - like cameras or the human beings who have evaluated our social behaviour since childhood - it's 'On Us', and this phenomenon may be too unfamiliar to trigger a sense of being observed.

Of course, this is good news for researchers keen to use eye-trackers to evaluate realistic behaviours, who now also learn the benefit of an acclimatisation period in their set-ups. Meanwhile, if we want to deter Google Glass users from recording things they shouldn't, another lesson from this research is that socially conscious app designers could insert reminders into recording software to keep users aware that their gaze has a witness. **AF**

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People who are more focused on the past tend to think of it as being located in front of them, even if the convention of their language is to see it as being located behind. Researchers made the finding by studying speakers of Moroccan Arabic, who mostly see the past in front, and comparing them with Spanish speakers, who usually see it as behind. *Psychological Science*.

Anxious interviewees perform better when interviewers are mean to them. The researchers think this is because anxious people are distracted by positive feedback that doesn't gel with their self-concept. *Anxiety, Stress and Coping*

Most people think they will be happier if they ignore strangers, but research conducted on public transport and in a waiting room found that people enjoyed themselves more when they were encouraged to strike up conversation with people they didn't know. *Journal of Experimental Psychology: General*