

# Personality and the prosocial context

Claire Lawrence, Eamonn Ferguson and John Maltby on the role of individual differences in pro- and antisocial behaviour

In this article, we show how personality and individual differences theory has much to offer the study of prosocial (altruism, cooperation, gratitude) and antisocial (aggression, risk-taking) behaviour. Perhaps more importantly, we highlight that, while pro- and antisocial behaviours are typically studied separately, personality approaches can encompass the study of the two together.

## question

How do context and individual differences influence each other in producing pro and antisocial behaviour?

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Personality psychology in Britain is making contributions to understanding a fundamental question: What factors drive prosocial and antisocial behaviours? This work has identified a number of insights into altruism and cooperation, gratitude and aggression, specifically how traits help us to understand the effect of context on the expression of behaviour.

The role of traits in examining altruistic and antisocial behaviours can be seen in many related subdisciplines within psychology, but often terms other than 'traits' are used. For example, in economics and evolutionary research, 'preferences', 'agents' or 'types', with specific characteristics, are highlighted, whereas risk factors (callous and unemotional traits, impulsivity) are referred to in psychiatry. Thus the role of individual variation is much wider than we perhaps at first realise.

## Altruism, cooperation and gratitude

Research examining traits and altruism has taken three approaches:

- 1 looking for evidence of traits as *distal* mechanisms supporting altruism,
- 1 exploring *proximal* mechanisms to sustain cooperation and helping; and
- 1 examining how traits influence the *response* to altruistic acts (reciprocity and well-being).

Nettle (2006) argues that trait variation has evolved through fitness related cost-benefit trade-offs. Thus traits reflect

a mixture of evolved costs and benefits that, depending on context, will influence ongoing behaviour (see Ferguson & Corr, 2012; Ferguson, Heckman & Corr, 2011).

Of particular relevance here is the trait of agreeableness from the five-factor model of personality. Its evolved benefits (attention to mental states, being a valued coalition partner: Nettle, 2006) and links to empathy (Nettle & Liddle, 2008) – in particular emotional (feeling for the other person) rather cognitive (understanding what another feels) empathy (Ferguson, Ward et al., in press) – indicate its potential role with respect to altruism. Indeed, agreeableness has been shown to moderate the effects of key predictors (e.g. group membership) of helping (Graziano et al., 2007). However, agreeableness has costs associated with it such as increased exploitability by others and reduced drive to maximise personal gain. Thus, it is possible to predict that highly agreeable people will be less likely to free ride in economics games and more likely to be exploited by others.

A facet of agreeableness, 'trustworthiness of others', also plays a central role in reciprocal altruism. Indeed, McManara et al. (2009) have shown that the costly monitoring of others' cooperation has a key role to play in the evolution of variation in this trait.

Other trait work in this area has drawn on sexual selection theory to try and explain the puzzle of altruism (natural selection should favour selfish behaviour). Philips et al. (2010) conjectured that if sexual selection was operating in our ancestral past on altruistic traits, then offspring should inherit genes coding for both altruistic mate preference and altruistic behaviour. That is, individuals expressing a stronger mate preference towards altruistic traits should be more likely to mate with those expressing altruistic traits. Consistent with this, they showed that both altruistic traits and a preference for altruism were heritable, with 67 per cent of the variance in the phenotypic association between

altruism and the preference for altruism being genetic.

The trait of gratitude is also starting to emerge as potentially useful in understanding both reciprocal altruism and social well-being. When placed within social-exchange theory of altruism, gratitude can be seen as a positive trait that guides reciprocal helping, shaping prosocial behaviours, promoting relationships with others, particularly when the rewards and benefits being exchanged between two people are costly (Algoe & Haidt, 2009). While researchers in Britain are looking at gratitude as a mechanism that is linked to a range of better indicators of psychological health (Wood et al., 2008, 2010), the possible mediation role of reciprocal altruism needs to be explored.

Finally, 'warm glow theory' from economics (Andreoni, 1990) is starting to emerge as an important proximal mechanism supporting and sustaining high-cost altruism. Specifically, Ferguson et al. (2008) have shown that blood donation is predicted by 'warm-glow' motivations – people donate because it makes them feel

good – rather than beliefs about the societal benefits (also Ferguson et al., 2012). In a series of economic games, Ferguson, Taylor et al. (2012) have also shown that blood donors (the altruists) are more likely to express warm-glow giving than non-blood donors. Further, at the level of general motives behind helping behaviour, a positive association is observed between altruistic traits and warm glow (Gebauer et al., 2008). Thus there is converging evidence that warm glow may be a key proximal mechanism for prosocial behaviour, which is linked to altruistic traits and tendencies.

### Aggression, antisocial behaviour

In a similar way to the work examining prosocial traits, the work examining aggression has also focused on evidence for distal evolutionary mechanisms, exploring proximal mechanisms to activate aggressive behaviour, and examining how traits influence the response to aggression triggering events.

Sex differences in aggression have been the focus of a large corpus of work

attempting to determine whether this difference stems from evolutionary or social pressures. Most notably, John Archer's work has highlighted male aggression as a consequence of sexual selection forces (Archer, 2009). Specifically, male aggression serves to deter potential rivals for mates, with peaks in aggression coinciding with peak reproductive periods. Female aggression, according to Archer (2009), tends to take place more when the ratio of females to suitable male mates is high – requiring female competition for mates.

In terms of proximal mechanisms activating aggressive behaviour, work has examined the role of conditions that dehumanise the victim (Greitemeyer & McLatchie, 2011), and perceived lack of retaliation (Archer, 2009). Developing this, a recent strand of work has identified traits specifically associated with sensitivity to context-specific triggers of aggression – provocation and frustration sensitivities (Lawrence, 2006). However, perhaps more interesting is the integration of personality traits and context in activating aggressive behaviours.

A crucial way in which traits help us to understand mechanisms behind behaviour is by understanding why people respond differently to the same context. Traits influence;

- | the expression/type of behaviour within a context; and
- | how contexts are interpreted.

These three influences are interlinked and not mutually exclusive. The former can be illustrated by the work on the trait narcissism. Narcissists (those with unrealistic and fragile high self-esteem) tend to respond aggressively under a particular set of circumstances: those characterised by challenge to their ability or status from others (e.g. Horton & Sedikides, 2009). Indeed, Lawrence (2006) has demonstrated that narcissists tend to be triggered to aggression by provocation from other people, and experience more anger under conditions of provocation but not by frustrations.



Blood donation is predicted by 'warm-glow' motivations

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## individual differences

Consequently, the trait interacts with the context the individual is operating within.

How about the role of trait influences on contextual interpretation? One good example can be seen in relation to antisocial behaviour. Together with studies examining the role of personality disorder and psychopathy on aggressive behaviour, work is focusing on two main influences on the perception and interpretation of aggression-relevant stimuli.

The first stems from the social information processing (SIP) approach (Crick & Dodge, 1994) and examines the influence of trait aggression and individual differences in sensitivities to aggressive triggers. This work has centred on examining the effect of traits of sensitivity to provocation and frustration (Lawrence, 2006) on the interpretation of others' actions as being aggressive – above and beyond broad-based aggressive traits (e.g. Lawrence & Hodgkins, 2009). Specifically, individuals who are sensitive to provocations from others more readily interpret others' behaviours as being more provoking – resulting in a vicious circle of aggression. When these individuals perceive the provocation being directed towards them, their levels of actual aggressive behaviour increase, therefore generating a context characterised by aggression (Lawrence, 2011). Thus, traits can influence the manner in which the context is perceived in the first place. If the trait results in more hostile attributions, the likelihood of aggressive behaviour in response increases.

The second main influence is on a more specific level, the processing and interpretation of faces and facial expressions are key in directing social relationships, and such interpretations are linked to cooperation (Krumhuber et al., 2007) and conflict (Burt et al., 2009).

Again, a small group of British researchers are focusing on the role of individual differences in the processing of aggressive facial expressions, in conjunction with Gray's (1982) reinforcement sensitivity theory (RST).



When the likelihood of retaliation is small, or where their anonymity is safeguarded, individuals high in reward responsiveness may be more likely to respond aggressively

In its original form (oRST) this theory identifies the behavioural inhibition system (BIS) as a system which essentially motivates the individual to move away from threat, the behavioural approach system (BAS) as motivating the individual to move towards rewarding stimuli, and the fight-flight system (FFS) as governing unconditioned responses to major threats. In particular, groups in Cambridge have demonstrated that activity in brain regions implicated with aggressive behaviour is moderated by BAS drive when people view aggressive or threatening faces (e.g. Bediou et al., 2009). Specifically, individuals low in reward sensitivity displayed an enhanced response to angry faces relative to neutral and sad faces. For those high in reward sensitivity, early processing did not differ

across the three emotions. It is possible that for those sensitive to reward, there is simply reduced top-down recruitment in the perceptions of aggressive and angry signals. The importance of BAS, and BAS drive in particular, in aggression processing is supported by Cooper et al. (2008), who have shown that those high in BAS drive experience more anger when imagining themselves in anger-provoking situations.

However, the RST has been revised (rRST: Gray & McNaughton, 2000). While this revised approach clarifies the BIS as a conflict-resolution system that motivates the individual to move towards a potentially rewarding stimulus, investigate a potentially threatening stimulus, or activate the fight-flight-freeze system (FFFS), much of the work examining how

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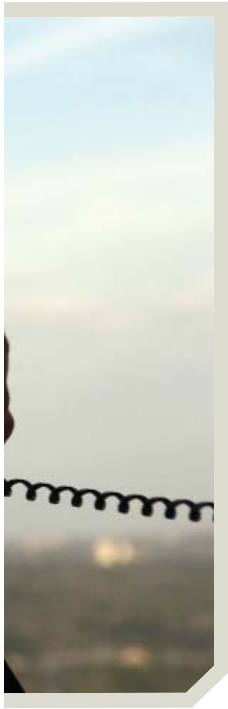
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RST impacts on aggressive behaviour and aggressive processing relies on measurements based on oRST. Current work in Britain (Heym et al., 2008; Heym & Lawrence, 2010b) is also developing ways to assess traits as they are characterised in the rRST, and this work is demonstrating that individuals who score high in traits associated with a greater FFFS response show greater reactivity to threatening and emotional stimuli in terms of heart rate and skin conductance (Heym & Lawrence, 2010a).

Importantly, while BAS is typically associated with approach towards rewarding stimuli, Heym et al. (2008) have demonstrated that BAS-Reward Responsiveness (RR) is associated with higher neuroticism and BIS and lower levels of psychoticism (while BAS – Fun Seeking is associated with lower neuroticism and higher levels of psychoticism). As a result, it appears that RR may be associated with pro- or antisocial tendencies depending on the context (Ferguson et al., 2011).

This would potentially apply to aggressive as well as general antisocial behaviour. For example, someone high in reward responsiveness will be motivated to maximise rewards. When the likelihood of retaliation is small, or where their anonymity is safeguarded, individuals high in RR may be more likely to respond aggressively to achieve some goal (or free-ride). Where sanction is more likely, a more conciliatory or peaceful mechanisms

may be chosen instead (e.g. increased cooperation in a public goods game when free-riders are punished). In this way, RR can be seen as an adaptive trait directing the person towards pro or anti-social behaviour depending on an evaluation of both the short- and long-term benefits of any action.

### Considering prosocial and antisocial behaviour together

While pro- and antisocial behaviours are traditionally studied separately, the notion of trait–context interaction and even trait–trait interaction highlights how common traits that can be used to inform both pro- and antisocial behaviour.

One example is with respect to RR described above (Ferguson et al., 2011) where RR potentially leads to anti- or prosocial behaviour depending on the prevailing context (specifically, whether the individual is anonymous or observed). When the context is anonymous, RR will lead the individual to maximise any benefit to self via behaviours such as free-riding. When the context is not anonymous RR will be associated with cooperation in order to avoid group sanctions and maximise rewards over time, through reputation building.

In terms of trait–trait interactions, Ferguson (in press) has suggested that alexithymia (inability to understand, identify and name emotions) should moderate the effect of empathy on both pro- and antisocial behaviour. That is, empathy offers the capacity to exploit or help (Blair, 2008; Ferguson, in press); which function is adopted, it is argued, depends on the development of social norms. As alexithymia is linked to a reduced ability to learn from losses (Bibby & Ferguson, 2011; Ferguson et al., 2009) and potentially social sanctions, high alexithymia – a lack of understanding of emotions – should be associated with ‘exploitative’ empathy, and low alexithymia with ‘altruistic’ empathy. Work by Viding and colleagues has also shown trait–trait interactions by demonstrating that

empathic traits – usually associated with prosocial behaviour – are particularly important in inhibiting aggression and antisocial behaviour in those with conduct disorder (e.g. Viding et al., 2009). Here, then, empathy interacts with aggressive traits in order to moderate aggression.

### Summary

It is clear that the role of personality in the expression of pro- and antisocial behaviour is integrally associated both with the contexts in which the behaviours are performed and individuals’ perceptions of those contexts. Recent work has highlighted the importance of evaluations of the prevailing context – both in terms of the activation of behaviours as a function of trait goals (e.g. those high in reward responsiveness helping in a context where identifiability is perceived to be high, and exploiting in a context where anonymity is perceived to be high) and, in turn, in terms of the role of personality on the perception of context. Exploring the reciprocal nature of personality and context provide a rich field for understanding human behaviour and its adaptability. If traits are ignored the effect of contextual factors will never be fully understood and interventions can never reach their full potential.



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