

The educational meets the evolutionary

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Psychology is an eclectic discipline – perhaps too eclectic. Evolutionary psychology has been proposed as a much needed over-arching paradigm to make sense of its diverse strands (Buss, 1995). Yet evolutionary psychology has yet to reach some corners of the discipline. For example, educational psychologists report little use of evolutionary theory to inform assessment and interventions (Kennedy, 2006; Woods & Farrell, 2006), and while a range of frameworks for educational psychology practice have been developed (Kelly & Woolfson, 2008), none are based on evolutionary psychology. I believe this needs to change.

Buss (1995) highlights the need for an integrating theory because different psychological disciplines have progressed in isolation from one another. Different assumptions and technical terms have impeded the progress of research. In educational psychology, this isn't just a theoretical problem: it's a practical one, affecting children's lives. The variation between approaches to behaviour management in schools provides a resonant example of theoretical discontinuities and corresponding practical dilemmas.

Refusal to cooperate, rudeness and aggression – these are the kinds of behaviour that most teachers manage regularly. But there is disagreement about how to deal with them. The main division is between pastoral and behaviourist approaches. Bear (2009) compares two

popular techniques: 'positive discipline' and 'assertive discipline'. He notes that positive discipline is based on building self-discipline through meeting the child's social/emotional needs, strong teacher-student relationships and fostering individual and collective responsibility. It completely avoids behaviourist-style rewards and sanctions. By contrast, assertive discipline very much draws on behaviourism. It is founded on clear rules, and consistently applied rewards and sanctions (termed 'corrective actions'). These are eventually internalised by the pupil. Later versions of assertive discipline have also stressed the need for good relationships.

So, faced with a child's refusal to start a piece of work, the teacher would need to make a decision. Making the assumption that there is a cause for refusal, such as anxiety, various empathetic (pastoral) responses might be chosen. But behaviourist responses might seem better – such as not awarding a house point, or warning of a detention. The problem is that showing warmth and understanding may be encouraging the child to refuse to work in order to spend time having a nice chat with the teacher (behaviourist). But punishment – or withdrawal of a reward – may make an already anxious child feel that the teacher is against them.

Striking the right balance between pastoral and behaviourist strategies largely rests on 'professional judgement' – possibly good, but possibly errant. This is

because supporting psychological theories and research are self-contained – they offer no rationale for deciding when one theory or another is more appropriate. In practice, Bear (2009) suggests that, for most schools, discipline consists primarily of punishment in order to bring about compliance to those in authority. Other rationales take a back seat.

The obvious next step? Perhaps to test these theories against one another to see which is right. But evolutionary psychology provides a different kind of resolution – arguably, a better one. Evolutionary theory predicts that an array of psychological mechanisms is likely to have evolved to solve different problems. Apparently conflicting theories may be right, but apply only under certain conditions (Buss, 1995; Cosmides & Tooby, 1992).

For example, there is evidence of the evolution of three distinct, universal types of human relationships – communal sharing, authority ranking and social exchange. These are associated with very different behaviour, logic and language (Fiske, 1992; Pinker, 2008). In evolutionary terms, this would have occurred because each type of relationship conferred a particular kind of genetic advantage. Each would, in turn, be supported by an array of distinct psychological mechanisms, which may well be specific to that relationship type (Buss, 1995). Pinker (2008) argues that our behaviour and use of language can both signal and influence which relationship type is operating – and, therefore, which mechanisms are operating – in a particular social relationship. In the same way, school approaches to behaviour management could be signalling particular relationships and eliciting corresponding mechanisms.

Evolved human relationships

Positive discipline may particularly tap into mechanisms that support communal sharing. This involves close, stable

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relationships where people choose to cooperate with one another on the basis of need. It seems to correspond with the vision of positive discipline (i.e. self-discipline, and both individual and collective responsibility). The evolutionary mechanisms supporting this kind of behaviour would be sensitive to genetic relatedness and 'selfish' at the level of genes (Dawkins, 2006). However, the psychological mechanisms need not involve selfishness – they could be ones of feeling genuine concern for people with whom you are familiar or who seem similar to you (Dawkins, 2006). It may be that the key strategies in positive discipline – showing empathy and providing assistance – are powerful cues for signalling to children that school involves a communal sharing relationship, thereby encouraging voluntary cooperation.

Primarily punishment-based approaches seem to tap into mechanisms related to authority ranking. As Bear (2009) notes, obedience to authority may be the unstated rationale for discipline. Here, people accept their place in socially constructed hierarchies based on a variety of status markers. Pinker (2008) notes that, in evolutionary terms, the individual with greatest physical strength could forcibly take the best resources, but using proxy markers for strength would be an advantage: it would avoid costly fights. He predicts that, if an individual assessed themselves as low ranking, they would settle for this until they felt their condition had improved and they could challenge for a higher rank.

Again it is important not to assume

that the evolutionary advantage to the genes coding for a psychological mechanism inevitably translates into the individual experience of motivation. So, it doesn't follow that school staff are 'selfishly' motivated to discipline children. However, hierarchy is a key feature of some school discipline policies – they consist of increasingly severe sanctions administered by progressively senior members of staff. For example, having a



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top button undone or wearing make-up would be a minor problem. But refusal to do up the button or remove the make-up becomes 'defiance' – a much more serious offence, especially if a senior member of staff is involved, it is a regular problem, or the child loses their temper and is 'verbally aggressive'. This may be dealt with by increasing the level of sanction – lunch-time detentions, then after-school detentions, followed by internal and external exclusions. Children who frequently break rules may also be required to report regularly to more senior members of staff, where defiance carries a much greater penalty. These types of policies may well be signalling authority ranking and thereby persuade children to accept a cooperative role in the school system.

Assertive discipline may also tap into authority ranking, with the teacher signalling dominance through implementing rewards and sanctions. The extensive use of tangible rewards in assertive discipline, such as colourful stickers and special treats, could also

signal social exchange. Pinker (2008) highlights social exchange as being characterised by the trade of resources in a fair and open way – the trade available is clearly set out. He also argues that the evolutionary mechanisms supporting social exchange are based on reciprocal altruism (Cosmides & Tooby, 1992). The evolutionary advantage comes from individuals benefiting equally, if not immediately, and then over time. So

relationships would often be important, as would good 'cheat' detection (Buss, 2008). Assertive discipline may signal social exchange because it partly involves a clear exchange of good behaviour for tangible rewards within good relationships.

New perspectives

None of the school discipline approaches map precisely onto the three types of relationships. For example, even quite young children will be well aware that their teachers are paid and are not just being altruistic in positive discipline approaches. And children are not free to walk away from the 'deal' offered in assertive discipline approaches. However, an exact match is not required for a psychological mechanism to be triggered (Pinker, 2008). Pinker notes that the mechanisms operating are not necessarily determined by the situation, but may be cultural, since in different cultures very different mechanisms can be involved in apparently similar social situations. So, marriage can involve buying wives (social exchange) or love (communal sharing). Pinker (2008) also points out that none of the mechanisms need to operate in isolation – more than one might well be involved in any relationship.

Relationships are likely to be complex. But it is possible to map some boundaries between the operation of different mechanisms, because people are highly sensitive to inappropriate application of relationship types. Pinker (2008) notes, for example, that prenuptial agreements seem unthinkable to many couples and suggests that this is because they are introducing the idea of social exchange into a communal, sharing relationship. Similarly, the indignation children feel when, say, they are told off for being late without being given a chance to explain, might indicate that they expected empathy and a response tailored to their needs (communal sharing) and were upset by being treated according to authority ranking. Alternatively, signalling indignation in this situation might

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function as a persuasive device, since indicating a communal sharing relationship might induce the teacher not to administer a punishment. Either way, these types of conflicts can provide evidence of distinct mechanisms operating even within a single relationship.

A way forward

The relationships in school are just as likely to be complex as any others. However, it should still be possible to make predictions about the impact of different discipline approaches based on the hypothesised mechanisms involved. For example, if punishment signals authority ranking, it could only increase external (not internal) motivation to cooperate and might also reduce feelings of communal sharing and/or social exchange. This might mean, for example, that children are less likely to want to cooperate voluntarily and may also be more wary of any reward systems in case the exchange is unfair.

There is existing theory – supported by research evidence – which notes that reward and punishment undermine intrinsic motivation. Self-determination



theory, developed by Deci and Ryan (2000), is a particularly comprehensive example. However, Deci and Ryan's theory is solely concerned with the conditions for degrees of internal motivation. It doesn't explore external regulation. They note that reward and punishment contingencies do regulate behaviour as evidenced by operant conditioning research, but they indicate that the assumptions of operant conditioning are fundamentally flawed without developing a specific theory of the conditions that govern the impact of reward and punishment.

An approach using evolutionary

psychology confers a real advantage: an integrated theory of evolutionary mechanisms is used to predict both internally and externally controlled cooperation. And this coherence of assumptions and rationales behind psychological mechanisms is immensely powerful – it opens up the possibility of making predictions about the interaction between hypothesised mechanisms. An experimental approach can then start to unravel the best assessments and interventions. Ultimately, it is only research into the interaction of psychological mechanisms that can provide the practitioner with a theoretically coherent and comprehensive evidence-base to inform advice. In resolving the discontinuities between theories, we will, in time, be able to move beyond the uncertainty of 'professional judgement'.



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