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The Prosocial Framework: Theory, Practice and Applications Within Schools

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Recent collaborations across psychological and evolutionary science have resulted in the emergence of an intervention programme for increasing the cohesion and effectiveness of human group processes. Prosocial (Atkins et al., 2019) combines Acceptance & Commitment Therapy (ACT; S. Hayes et al., 2012) and Multi-Level Selection Theory (Wilson & Sober, 1994) with Nobel Laureate Elinor Ostrom's Core Design Principles (CDPs) for effective group-level processes (Ostrom, 2012, 2015). Ostrom's work was ground-breaking but, being primarily descriptive in nature, did not provide a full account of the processes and procedures required to implement the CDPs. The current paper outlines the theoretical underpinnings of Prosocial and offers guidelines for its application within educational communities, providing specific examples of the wide array of ways in which the approach can be applied by professionals such as educational psychologists (EPs) to bring about positive change at the systemic level.

Introduction

A positive, meaningful sense of connection to one's social environment has long been understood as a central feature of the wellbeing of individual human beings (Aked et al., 2008). Recent large-scale research trials have identified social connectedness as one of six core features of positive psychological wellbeing (Barsakod, 2019). At the group level, within schools and other educational communities, a *strong sense of belongingness* to one's community has been linked to a range of beneficial developmental outcomes, such as positive psychological wellbeing, motivation levels, positive self-concept and high levels of self-efficacy (Korpershoek et al., 2020). But what are the features of a truly cohesive, supportive and effective social group? And how might we target these features in community-based and group-based interventions to optimise how we humans work together collaboratively, supportively and inclusively?

Schools are complex social environments in which staff co-operate and co-ordinate their actions over extended periods of time and across multiple settings to create a range of differentiated learning contexts for students. The ubiquity of the co-operation present in schools can easily lead to it being overlooked, yet it is essential for the creation of effective learning environments. But productive co-operation processes don't *just happen*. Drawing on decades of research with human and non-human animals, evolution science has shown that co-operation needs specific contexts in which to occur (Nowak, 2006). When these conditions are not present, co-ordinated behaviour towards agreed goals falls away, to be replaced by individual needs and aims (Wilson et al., 2013).

Co-operation (when individual organisms work together for mutual benefit) is a particular type of social behaviour, and efforts to understand it in evolutionary terms can be traced back to the times of Charles Darwin. Since then, co-operation has been extensively studied across a wide range of organisms, from plants and single-celled amoeba to insects and mammals, including human beings (S. Hayes & Sanford, 2014). Using game theory, Robert Axelrod (1984) demonstrated that co-operation between organisms needs three basic conditions — *good communication* in an *ongoing relationship* in which *benefits flow to both participants*. But what do these conditions look like when they are working well in everyday human society? One answer to this question was provided by the political scientist Elinor Ostrom, for which she received the Nobel Prize in Economics in 2009.

Ostrom studied how community groups co-operate to manage common-pool resources, such as water, fisheries and forestry (see Ostrom, 2015 for a full discussion). Through these efforts, she identified and described several Core Design Principles (CDPs) that, when present in human groups, support co-operation and co-ordinated action between group members. While the CDPs are individually straightforward in principle, Ostrom found that they were not always implemented, in terms of group members' behaviour, and this, in turn, impacted overall group functioning. The more groups implemented the CDPs, the greater their levels of co-operation and the more sustainably, equitably and effectively they utilised their shared resources (Wilson et al., 2013). In essence, Ostrom had identified the basis of human group co-operation and it was in recognition of the profundity of this

work that she received the Nobel Prize.

Ostrom's CDPs describe what groups need to do in order to increase their levels of co-operation and overall effectiveness (Wilson et al., 2013). However, how practitioners work to improve their presence within groups is a different challenge altogether. One recently developed approach, designed for exactly this purpose, is Prosocial (Atkins et al., 2019). Prosocial draws upon pioneering work over the past three decades in the area of Acceptance and Commitment Therapy (ACT; S. Hayes et al., 2012) to support the implementation of Ostrom's CDPs within human groups.

The Prosocial method for achieving this is to apply to the CDPs a version of the ACT behaviour change model, scaled up to the group level. The intention here is to help the group explore and develop a shared sense of awareness of:

- the kinds of collective values they want to express in their collective efforts and activities;
- how the expression of these values might look in the group's behaviours;
- the range of difficult internal experiences (thoughts, emotions, sensations) that might show up along the way and how group members can develop a flexible and conscious relationship with these internal events; and
- what it might look like if these difficult internal experiences were driving the group's actions.

In this paper, we outline Prosocial at both the theoretical and practical/implementation levels, including the ACT model and Ostrom's CDPs. We also outline, in brief, Multi-Level Selection (MLS) theory (Wilson & Sober, 1994), as a theoretical lens through which one can usefully look when understanding how ACT processes can be scaled up from the individual level to the group level. Finally, we provide a handful of examples of how Prosocial can be applied within schools and educational contexts, with the aims of improving a sense of belonging, collaboration and effective functioning at the group level.

Acceptance and Commitment Therapy

ACT is an evidence-based process model of therapeutic change and is considered part of the third wave of cognitive behavioural therapies (S. Hayes & Hofmann, 2017). The purpose of ACT practice is to increase psychological flexibility, which is defined as contacting the present moment as a conscious human being and, based on what the situation affords, acting in accordance with one's chosen values (S. Hayes et al., 2004).

ACT is underpinned by a general theoretical account of human language and symbolic functioning, known as Relational Frame Theory (RFT; S. Hayes et al., 2001), rather than by some less general account of a specific perceived deficit within the human condition. The implication here is that the wellbeing skills targeted within ACT are relevant to, and can be usefully applied with, just about anyone, not just those who meet clinical significance criteria for a particular mental health condition. Indeed, this is evident in the vast array of contexts — both across and beyond various diagnostic categories — within which ACT has been successfully applied (Hooper & Larsson, 2015; Gloster et al., 2020). As such, ACT is a generally applicable model for supporting human wellbeing and positive behaviour change and is considered to be transdiagnostic.

Historically, ACT has been applied to support the psychological flexibility of individuals, though many empirically well-grounded, ACT-based interventions have been delivered to individuals within group contexts (e.g., see Flaxman et al., 2013). Prosocial (Atkins et al., 2019) seeks to apply ACT-based behaviour change processes at the group level, to support the implementation and maintenance of Ostrom's CDPs. In essence, the aim here is to identify in a collaborative and democratic way the values present within a particular group; the kinds of actions that would exemplify those values within the group; and what kinds of difficult internal content (thoughts, feelings, sensations) might function to get in the way of the group's movement in these valued directions.

The Evolutionary Origins of Co-operation

In the short term, co-operative behaviour involves an individual giving up time and energy to help another individual. While this is commonplace across the living world, in the gene-centred view of evolution, which places the individual's self-interest at the centre of evolutionary change, it is difficult to understand why it would occur. After all, why would someone help another person, or even put themselves at risk, particularly if they are genetically unrelated?

Darwin's response was that "although a high standard of morality gives but a slight or no advantage to each individual [person] and his children over the other [people] of the same tribe ... an advancement of the standard of morality will certainly give an immense advantage to one tribe over another" (Darwin, 1871, p. 166). In other words, co-operation emerges because groups of individuals that helped each other would outcompete groups of individuals that did not. In effect, the group is the unit of selection, and co-operative behaviours within that group are selected (and increase in frequency) because they increase the individual's chances of survival in the longer term. By co-operating with others in their group, individuals increase their own chances of surviving and thriving. Today this account of co-operation is called Multi-Level Selection (MLS) theory (Wilson & Sober, 1994).

As early humans evolved in small groups (e.g., tribes),

socially co-operative behaviours were highly adaptive. For example, if one tribal member told another tribal member that there is a predator heading this way, this behaviour is more likely to be reciprocated by the second tribal member in similar future scenarios. Ultimately, it was (and still is) mutually advantageous for members of tribes and other small groups to co-operate in this way as, in the longer term, the chances of surviving and thriving are increased, even though these longer-term gains may involve shorter-term costs. MLS (Wilson & Sober, 1994) describes the dynamic interactions between different levels and units of selection, such as the individual and the group. Because behaviours that are good for the individual are often bad for the group; if the group is to be successful then it is in its members' interests to promote co-operative and prosocial behaviours above self-interest. This means that for humans there is a constant dance between behavioural expressions that are motivated by (often relatively immediate) self-interest, on the one hand, and co-operative behaviours that are for the good of the group, on the other hand.

Fast-forwarding to a modern-day situation, let's say two individuals work in the same small team (a modern-day tribe, one might say). The first team member misses an important meeting, during which essential information is shared about how to perform a particular task next week. This same team member texts the second to request a brief meeting to talk through what is needed for next week's task. If the first team member co-operates with the request, it would come at a personal cost — it would require time and energy, essentially. However, doing this would mean similar requests in the opposite direction are more likely to be reciprocated at a later date. Not only this, but if being able to perform this task has a direct effect on the overall performance of the team in some specific way, this kind of co-operative behaviour will have had a positive effect on the whole group.

According to MLS theory, human social behaviour is constantly shifting between more self-interested and group-interested actions. This isn't an aberration, but the natural outcome of selection occurring simultaneously on two different levels. However, as Hayes and colleagues put it, "The balance between these two levels of selection can be tipped toward co-operation and between-group selection if the individual can do relatively well as part of a larger organisational unit, but self-serving actions are restrained." (S. Hayes et al., 2021, p. 199). Put another way, in the longer term the individual wins when the group wins. How groups achieve this was exactly what Ostrom studied, and she found that the more they implemented the CDPs, the more co-operative, prosocial and effective they were (Ostrom, 2012).

The Core Design Principles

Individuals within a social system, such as a school, share a finite pool of material and human resources and need to co-operate to utilise them efficiently and fairly. These resources certainly include physical resources such as classrooms; stationary; IT resources; food and water; outdoor play spaces and games equipment. But they also include what we might describe as psycho-social resources, such as the skills of the various staff members within a school and the amount of time staff have to provide their professional services. When individuals act in a narrowly self-interested way, persistently attempting to maximise their own immediate access to valuable and finite resources in a shared-resource system such as a school, this depletes the resources available to others (Ostrom, 2012; Wilson et al., 2013). This is an example of what Hardin (1968) referred to as *the tragedy of the commons*.

More generally, the *tragedy of the commons* refers to situations in which individuals within a shared resource system act in a predominantly self-interested fashion, leading to a lack of availability of, and often the eventual depletion of, resources to others within that particular shared system.

Whilst the flavour of the group dynamic described within the tragedy of the commons is probably familiar to all of us in some ways, many groups who share common pool resources manage to avoid these features of poor group-functioning very well. According to Ostrom (2015), groups that manage to avoid the tragedy of the commons embody within their group dynamics eight key features, which, as noted above, she referred to as the CDPs. These are set out below in a form slightly adapted by Atkins et al. (2019).

CDP 1: Shared Identity and Purpose

Groups function at their best when the sense of group identity is a shared one, between all members, including a clear articulation of the group's composition and what being in the group means to its members. Closely related to this, when CDP One is working well within a group, there is a shared, coherent sense of the group's purpose(s).

CDP 2: Equitable Distribution of Contributions and Benefits

Individual members of a group will vary in terms of their contributions to the group. Some, for example, will offer more time and effort than others in relation to a particular purpose or function of the group. Variation in type and level of contribution is absolutely fine in terms of effective and co-operative group-functioning, provided the distribution of contributions and benefits are transparent and perceived to be in proportion to one another.

CDP 3: Fair and Inclusive Decision-Making

We human beings tend to be motivated when we feel a sense of control over the decisions that affect us — when we are empowered by having a voice in the decisions that

affect our lives. Organising groups in this way builds trust and mutually valued relationships between group members.

CDP 4: Monitoring Agreed Behaviours

For groups to function well, and to build confidence that the group is moving toward their shared purpose, it is important that there is an effective means of monitoring agreed-upon behaviours. Reading this might bring to mind the kind of monitoring commonly seen in a hierarchical organisation, wherein a more senior staff member (say a line manager or supervisor) may monitor the behaviours of those s/he manages. Whilst this is, of course, one type of monitoring that can, at times, be important, it is far from the only form of important monitoring of group behaviours. When this CDP is working well within a group, whether there is a management (or other type of) hierarchy or not, all members of the group support one another, in a non-coercive manner, to keep their feet moving in the group's valued direction.

CDP 5: Graduated Responding to Helpful and Unhelpful Behaviour

This principle describes the ways in which effective groups demonstrate helpful and effective responses to both behaviour that helps the group and behaviour that is less helpful for the group. Whilst Ostrom's original outlining of CDP Five placed particular emphasis on responding to unhelpful behaviour, the fusion with psychological science to form the Prosocial framework (Atkins et al., 2019) has seen the addition of a strong emphasis upon the provision of positive responses to behaviours that are helpful for the group, and that connect well with the group's purpose and generally valued direction.

CDP 6: Fast and Fair Conflict Resolution

Conflicts between individual members of a group, or even between sub-groups within a wider group, are an inevitable part of group dynamics. At some point or another in a group's history, a conflict of some kind will require resolution. As this is generally considered to be a given when individuals come together to form groups, conflict resolution processes that are effective, that are perceived to be fair and that are, where possible, swift are another core feature of effective and collaborative groups within Ostrom's system.

CDP 7: Authority to Self-Govern

Whereas CDPs One to Six relate to processes *within a group*, CDPs Seven and Eight relate to processes *between groups*. Atkins et al. (2019) describe the need for a group to have the authority to self-govern in the following way: "Every group is embedded in a larger society that can limit its ability to govern its own affairs, [which can] interfere with the objectives of the group . . . . To create high-performing groups, it is essential to provide an environment that does not excessively interfere with their capacity to implement principles one to six." (Atkins et al., 2019, p. 42).

CDP 8: Collaborative Relations with Other Groups

Most human beings would, in fact, probably identify as members of multiple groups. This can include, for example, one's employing organisation (e.g., school); one's team (e.g., the science department); one's profession (e.g., teachers); one's family unit (immediate and/or wider family); or groups related to preferred leisure activities (e.g., a swimming club). How collaborative a group tends to be with other groups with whom they interact can vary considerably. Indeed, this is the case across all kinds of groups, whether they represent a team within a professional organisation, a community-based group a family group or a friendship group. CDP Eight, therefore, focuses on helping groups to interact with other groups effectively, and in ways consistent with their shared values.

Prosocial in Practice

In practice, the application of Prosocial involves the use of ACT procedures, at the group level, to target one, some or all of Ostrom's eight CDPs. There exists a wide range of ACT-based tools and procedures which can be adapted for group-level purposes. Of these, the tool that has been most centrally adopted for work within Prosocial to date is the ACT Matrix (Polk et al., 2016).

Metaphorically speaking, the ACT Matrix can be described as a lens through which one can look in order to make sense of one's experience and to enable values-consistent patterns of action. As a visual representation, it consists of two axes, each with two poles, layered on top of one another with one rotated horizontally and the other rotated vertically. One axis consists of an internal and an external pole, with the internal pole representing the world inside our skin — the world of thoughts, feelings and sensations — and the external pole representing the world of observable (in the shared sense) action. The other axis consists of a toward and an away pole, with the toward pole representing our personal values — the qualities that we most want to move toward and be about in the world — and the away pole representing events and actions that move us away from our values and from what we most want to be about in the world. This gives rise to the following four quadrants:

- Internal/Toward
- Internal/Away
- External/Toward and
- External/Away.

Figure 1 provides an example of an *individual* ACT Matrix, complete with an example of the kind of questions one might use to experientially reflect within each quadrant.

The ACT matrix in Figure 1 is designed for use with individuals. That is, the questions in the quadrants refer to "I". However, for use within the Prosocial framework, two adaptations to the ACT matrix are required. Firstly, the pronoun "I" is replaced with "we", and respondents to the questions in the four quadrants are a group, rather than a single individual. Secondly, the questions in the quadrants are worded in such a way as to target specific CDPs. For example, let's say that a Prosocial facilitator and a group-in-focus agreed that it would be helpful to use a group ACT Matrix with a particular focus on CDP One. And let's say (given relatively recent global events) that the context was a school's response to the Coronavirus pandemic. In a situational context such as this, the question in the top-right quadrant might read something like: "What valued qualities do we, as a group, most want to express in the way we respond to the COVID-19 global pandemic?" (See Figure 2 for this example embedded into a group ACT matrix). Conversely, if the group matrix focus was brought to bear on CDP Four, the question in the top-right quadrant might read something like: "What values do we, as a group, most want to demonstrate in the way we track agreed-upon group behaviours, during our response to the global pandemic?" In general, whilst the "I" pronoun would need to change to "we" in all four quadrants of the ACT matrix, the questions in quadrants two, three and four would likely remain broadly the same, with the relevant CDP-context following from the phrasing of the question in quadrant one (the internal–toward quadrant).

A frequently asked question from those beginning to use Prosocial goes something like this: "It all sounds great, but how do I decide where to start with my group?" There are many ways to get started and, as a general rule, many new-to-Prosocial practitioners choose to start with a small group to which they themselves belong. Doing this can feel like a safe starting place and can also have the very useful function of enabling the practitioner to experience the Prosocial change process themselves, *from the inside*.

However, when getting started with another group, the question of which CDP to bring into focus initially is often at the fore of practitioners' thinking. Ultimately, in the spirit of collaborative working, this should be decided in consultation with the group. Whilst there are a number of ways to approach this, one method that can prove highly effective is the use of the spoke diagram in Figure 3 and Figure 4.

The spoke diagram can be completed by individuals within the group as a kind of self-evaluation of how members feel the group is doing in relation to each CDP. Having been conceptually introduced to the CDPs, individuals within the group have an opportunity to rate the group's functioning in relation to each CDP. Within the spoke diagram, each spoke represents a kind of scale for one or other of the CDPs, with more positive ratings toward the outside of the scales and less positive ratings toward the centre. Figure 4 offers an example of a completed spoke diagram by one individual group member, suggesting that their experience of the group is broadly positive in terms of CDPs One and Seven, for example, but slightly less positive in terms of CDPs Two and Six.

The spoke diagram starts off as a personal reflective activity, which can then be used as a platform for related conversations at the group level. Whilst these conversations can be done in a fairly organic manner, one way of using the spoke diagram (which can maintain response-anonymity and therefore a sense of psychological safety) is to aggregate individual scores for each CDP from group members, in order to derive an average rating of each CDP for the group. These average scores can be used as a conversation starter, the purpose of which would, in part, be to decide which CDP(s) might be helpful for the group to focus on.

Applying Prosocial in Schools — Potential Applications

The potential range of benefits of ACT within a school context has been highlighted elsewhere (e.g., see Gillard et al., 2018; Szabo & Dixon, 2015), as have the benefits of applying evolution science principles in education (e.g., see Wilson et al., 2011). As a relatively new intervention technology, which seeks to marry these two areas of scientific discipline, the following section outlines three examples of possible applications of Prosocial within educational settings. Readers should note that the potential applications are far wider and more varied than can be outlined here. However, the hope in what follows is that the examples offered are relevant to many readers' practices within schools and provide an initial sense of the potential scope for the application of Prosocial.

Developing Inclusive Practice Regarding Provision for Children With SEND

In the U.K., the Department for Education's Special Educational Needs & Disabilities (SEND) Code of Practice (CoP) makes clear that all schools have a statutory responsibility to make provisions for children and young people with SEND. It states that "Some children and young people need educational provision that is additional to or different from [other children] . . . . Schools and colleges must use their best endeavours to ensure that such provision is made for those who need it." (Department for Education & Department of Health, 2014, p. 25).

Establishing consistently high inclusive practice across a school can, however, be very challenging. Making additional provisions, including differentiation of lessons and additional support in class, takes time and often requires careful reflection on the part of class teachers. In fact, extra time, within the teaching profession, can often feel in short supply. For

Figure 1

Example of an Individual Act Matrix

example, a workload survey carried out by the DfE in recent years reports that, on average, full-time-employed teachers in the U.K. work 54 hours per week, whilst those with leadership responsibilities work 60 hours on average (Higton et al., 2017). Both figures are well above full-time contracted working hours.

The application of Prosocial to this challenge could well help create a collaborative, shared and effective effort to design and build highly inclusive learning environments for children with SEND. As an intervention technology applied within schools, using a Prosocial approach for this purpose could help an entire school staff community to openly explore together questions like:

- What kinds of values do we, as a community, want to express in the way we make provisions for children with SEND? And what might this look like in the way we work together and support one another? (CDP One)
- What values do we want to express in the way we respond to helpful and less helpful inclusive practice for students with SEND within our school? And what might this look like in our actions and interactions? (CDP Five)
- What kinds of values do we want to demonstrate, as a school community, in the way we interact with local and national partner organisations who have a role in supporting children with SEND? And what might this look like in practice? (CDP Eight).

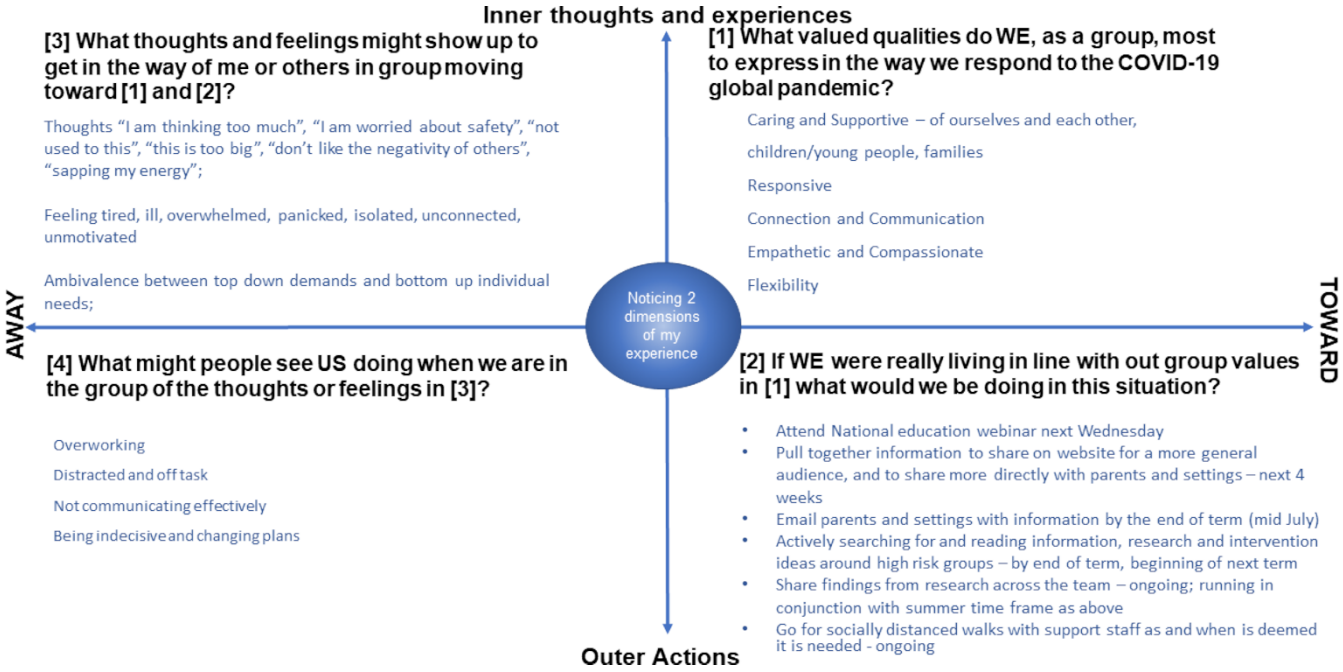
Developing Effective, Evidence-Based Mental Health and Wellbeing Practice and Policy

In 2017, the U.K. Government published *Transforming Children and Young People's Mental Health Provision: A Green Paper* (Department of Health & Department for Education, 2017). With its propositions to create Mental Health Teams around schools and to make the role of Mental Health Lead a statutory requirement, the green paper makes it clear that schools and other educational settings are at the centre of the national strategy to improve the mental health and wellbeing of children.

Whilst schools can sometimes find it difficult to select and embed best practice around children's mental health (Gibby-Leversuch et al., 2019), and may rely on specialist external consultants for advice on such matters, the benefits of mental health practices being embedded within a whole-school framework have been frequently stated (e.g., see Public Health England, 2015; Sterling & Emery, 2016).

Figure 2

Example of a Populated Group ACT Matrix Applied to a Specific Context (COVID-19)



Developing effective, organisation-level mental health and wellbeing practices in a way that creates a shared sense of purpose, voice and responsibility is another context within which Prosocial could be usefully applied within schools. The approach could enable a consistent and clear narrative around what mental health and wellbeing is, how the community can work together to promote it (linked to CDPs One and Three) and how the community can monitor the school's progress toward its wellbeing goals (linked to CDP Four), for example.

Developing Collaborative and Cohesive School Leadership Teams (SLTs)

Building a leadership team that is cohesive, high in complementarity and united around common purposes is essential to the effective functioning of any organisation (Pendleton & Furnham, 2016). Within the school context specifically, this view is supported in a research report from the National College for School Leadership (Bush et al., 2012). In this report, Bush and colleagues highlight the importance of collaborative school SLTs, citing key ingredients of success such as clearly defined roles and purposes, shared values and effective ways of communicating with one another and with the wider school community.

The Prosocial framework could be effectively applied within senior (or even broader) leadership teams for a wide variety of purposes. For example, a group ACT matrix could be used within a leadership team to develop a shared, coherent narrative around the team's identity and purpose (CDP One), how individual roles and responsibilities can be established within the leadership team, and the benefits of these roles (CDP Two) and how the leadership team can engage in fair, effective and inclusive decision-making practices (CDP Three).

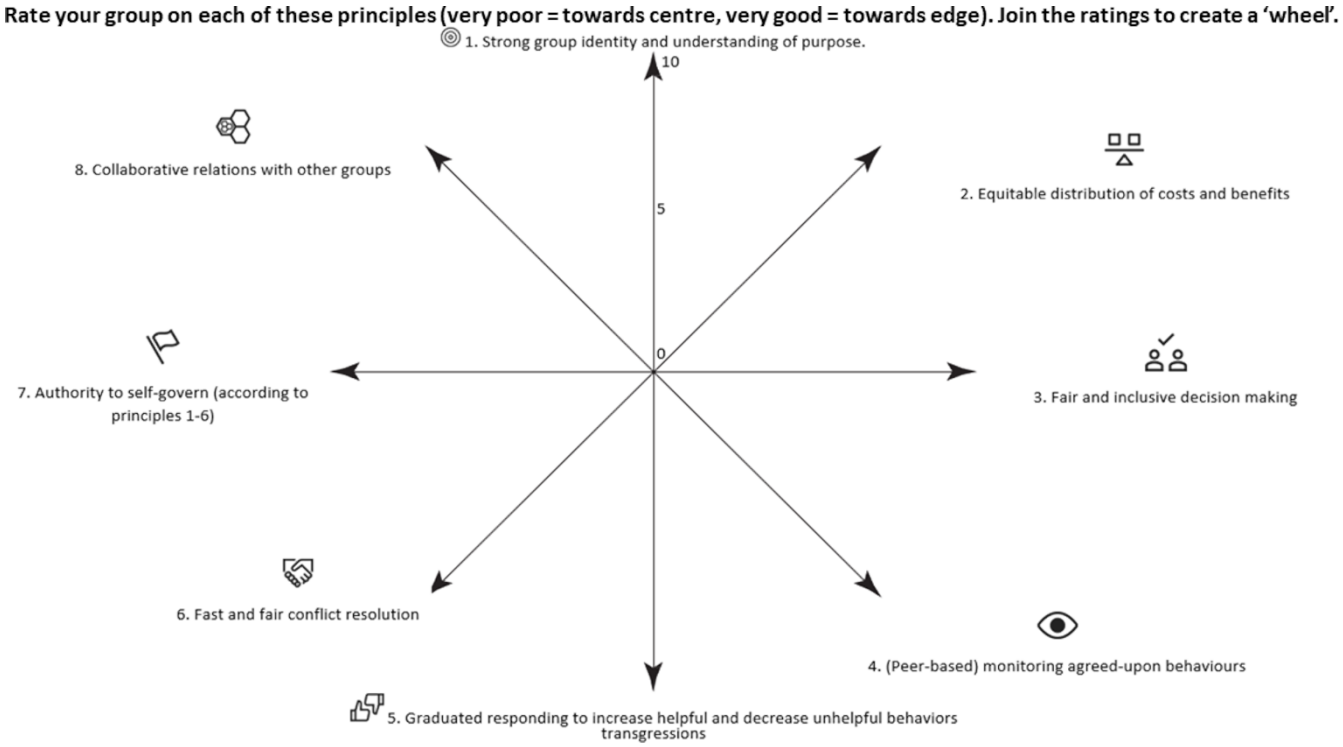
Concluding Comments

Prosocial is a recently developed group/community level intervention framework that is grounded in some of the strongest psychological and evolutionary science available to date. Its applications are, it is suggested, extremely broad and varied. Put simply, if a group of humans is struggling to function effectively together, regardless of the context in which this is occurring, the application of the science upon which Prosocial is built is likely to be of considerable assistance.

This article outlines just a few potential applications of the Prosocial framework within schools and other educational settings. However, Prosocial could be applied to many other groups and for many other purposes within schools, such as with college or secondary-phase students in their tutor groups; within extra-curricular clubs; or even within subject classes. With certain developmental considerations taken into account (for relevant discussions, see L. L. Hayes & Ciarrochi, 2015), this proposition is equally relevant to groups of

Figure 3

The CDP Spoke Diagram

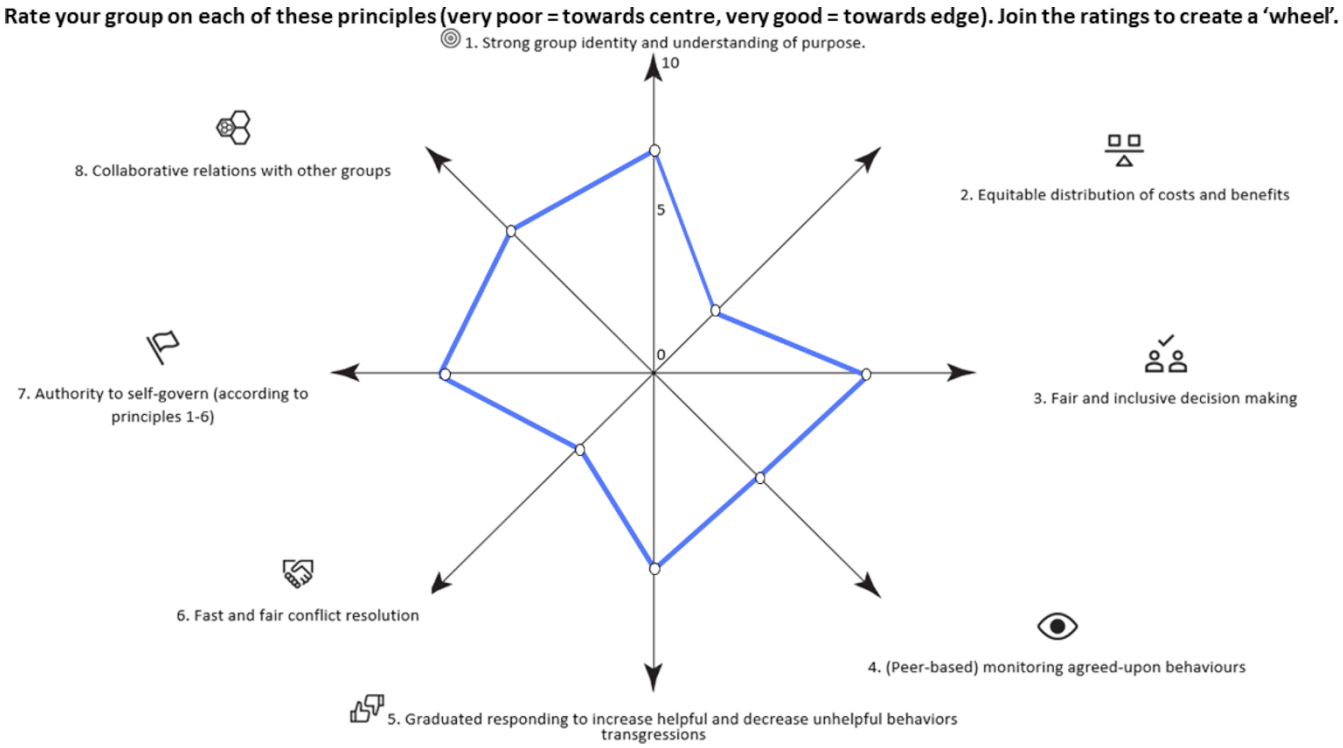


children at the primary phase of education.

Finally, the authors feel it is important to recognise that this article is written during the time of the COVID-19 global health pandemic. Whilst the Prosocial framework has applications far beyond contexts relevant to COVID-19, it seems appropriate to point to its relevance and importance during this difficult time. At present, schools around the globe are working tirelessly to keep their communities physically and mentally safe and well, whilst providing an education to their children. There are few times in recent history when it was more important for school communities to cohere effectively around a set of common values and purposes. As such, in writing this article, the authors hope that psychologists will be able to apply the Prosocial framework in schools to support and enable the development of strong, supportive, collaborative communities with a shared and valued sense of group identity and purpose.

Figure 4

An Example of a Completed CDP Spoke Diagram



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