



Cooperative human social behaviour

It is fascinating to watch the social behaviour of large groups of creatures in the animal kingdom. The patterns made by flocks of birds flying in formation across a sunset sky, and by schools of silvery fish executing swift manoeuvres underwater, are spectacular to see. Some of this social behaviour has economic effects too. The pollination of crops by bees has been estimated to add about \$15 billion of value annually in the USA. For example, the almond orchards of California (where a million acres of land are devoted to the production of 1.8 million metric tons of almonds – about 60% of world production) are entirely reliant on the pollination services of 1.4 million beehives that are brought in specially each year, as this monoculture cannot provide sufficient pollen and nectar to sustain bees year-round. It is interesting that the revenue from migratory pollination surpassed that from honey around 2007. The bee-keeping industry goes largely unseen until we experience the occasional bee-sting.

Bees have been a favourite metaphor for human society at least since the Roman poet Virgil more than 2000 years ago. In South Africa, Eugene Marais was an early pioneer of the study of animal behaviour, ethology, carrying out research on termites and baboons in the Waterberg mountains. His book '*The Soul of the White Ant*' (published in English in 1937, based on articles originally published in Afrikaans in *Die Burger* and *Die Huisgenoot* in the 1920s) beautifully described his observations of termite behaviour and showed the remarkable way in which the behaviour of individuals fulfilling a particular role contributes to the overall functioning and survival of the collective termitary. Marais considered the colony as a single complex organism. His ethological studies of the social structure of a troop of chacma baboons were also very insightful.

Humans are also social creatures. Their patterns of interaction are even richer, with the added advantage of language to provide more intricate forms of communication. Although there is much individualism in human behaviour, there is also a significant element of cooperative conduct that contributes to the greater functioning of society as a whole. I would like to focus on the type of behaviour where individuals contribute to the good of others, or society as a whole, even when this comes at a cost to themselves. In today's transactional world, where seemingly everything has a price, what motivates people to contribute their time and energy for no monetary reward? Is voluntary service still alive today?

This altruistic behaviour is explained in many ways. The Biblical injunction 'it is more blessed to give than to receive' is believed by many. Others maintain that there is no such thing as pure altruism, and that people meet various needs of their own by giving to others. This too has some validity. It is indeed rewarding to feel that you have done a job well, or to be thanked for a contribution you have made. It is good and healthy to feel appreciated, although it is possible to take this too far to the extent of a pathological need to feel magnanimous, or to the point of satisfying a need to be needed. It is also possible for those who excessively love structure and rules to desire positional power. However, I see the principal reason for volunteering is that it makes the world a nicer place to live in. It is really enjoyable to participate in activities where you feel you are doing something you are good at, or that you are contributing to something worthwhile.

Service clubs, such as Rotary, Round Table, or Lions exist as voluntary non-profit organizations to provide networking and social events for members, but also primarily to provide charitable services to orphanages, animal shelters, and many other needy and deserving causes, including working towards the eradication of polio. The oldest of these organisations, the Rotary Club of Chicago, was formed in 1905 by an attorney called Paul Harris. He wanted to create a professional club with the friendly feeling of the small towns of his youth. The Rotary name came from the early practice of meetings rotating between members' offices. Rotary now has 1.2 million members around the world, and has the motto 'Service above self'.

Another great example of a more recent volunteer-run (in two senses of the term) movement is the

Cooperative human social behaviour (*continued*)

parkrun phenomenon. A group of friends started running together on Saturday mornings in Bushy Park in London. South African-born Paul Sinton-Hewitt (who used to second Bruce Fordyce in the Comrades Marathon) set up a computerized record-keeping system for free 5 km runs like these, and founded what has now become the internationally successful parkrun system (already active in twelve countries). Bruce Fordyce started parkrun in South Africa in November 2011, with 26 people running at Delta Park in Johannesburg. Just over four years later, there are now over 70 parkrun venues and more than 300 000 registered participants around the country. Each of these runs is manned by a group of volunteers who take it in turns to set up the course, time the runners, and make the results available online. There are numerous stories of how this has changed people's lives for the better – inspiring them to become much healthier and spend time in the outdoors with family and friends.

The development of open-source software is another good example of cooperative human social behaviour. Some of the world's most important computer programs (for example, the Linux operating system, the Apache web server, and various web browsers and e-mail systems) are developed by teams of people who offer their time and expertise without any expectation of financial reward. In return, they expect others to contribute freely too.

The lifeblood of a society such as the SAIMM is made up of a vast number of volunteers. Many of these people go above and beyond the call of duty in the service of the community to which we belong. Of course, there are challenges in managing and coordinating the efforts of people who are not paid for their work and not subject to the usual disciplines of an employer-employee relationship, but the SAIMM system could not function without the contributions of numerous volunteers. Council members meet every two months and regularly offer their wisdom and direction to the affairs of the Institute. The majority of the SAIMM's work is carried out by members of committees who put together the publications and events that provide the principal reason for the SAIMM's existence. Whether your interest is in mining, metallurgy, or economics, there is a place for you to get together with other like-minded individuals and put together a conference on a subject that interests you. There is a great deal of effort that goes into writing and reviewing papers and giving presentations that communicate ideas to the rest of the community, but the rewards are many. In addition to the networking, peer recognition, and business opportunities, there is much intellectual stimulation to be had, as well as opportunities for personal growth and development. There is also the camaraderie and friendship that comes from being a part of a community. I would like to encourage you to get involved and volunteer some of your skills and time – it really is worth it. To the active volunteers out there – your contributions are greatly appreciated!

It has been said that 'Volunteers are not paid – not because they are worthless, but because they are priceless'

R.T. Jones
President, SAIMM