REVIEWS

Teamwork: Multi-Disciplinary Perspectives, edited by Natalie Gold. Palgrave
Macmillan, 2005, xxvi+253 pages

This collection of articles on teamwork is dedicated to the memory of
the late Michael Bacharach, economist, game theorist, and enthusiast of
interdisciplinarity in the social sciences. It is then to some extent a collective
gesture of remembrance. It is ironic, therefore, that it might be far from
clear to the reader that this volume *exemplifies* teamwork. For, as with any
other edited collection of papers, so far as the content of chapters goes
it might be seen as a by-product of bilateral interactions with an editor,
undertaken to further a career. The irony is heightened by the varied array
of topics and approaches the volume comprises. I am happy to say that my
impression is nonetheless that there is considerable team spirit behind the
volume, based on personal recollection of the stimulating interdisciplinary
memorial conference that gave rise to it.

There are good reasons why economists, other social scientists and
philosophers should be interested in teamwork. In economics, for example,
there is the problem of explaining how teamwork works, since it requires
solutions to free-rider and principal-agent problems. In related disciplines
such as management there are important practical questions such as how
to further team performance. In philosophy, there is the task of conceptual
analysis of collective responsibility and agency. Parallel literatures
have recently emerged on team reasoning in economics, and collective
intentions in philosophy. The appearance of this volume is therefore timely.

The contents are an extended editorial essay and ten articles straddling
a wide variety of disciplines, with roughly equal space allocated to analysis
and empirics. Margaret Gilbert provides reflection on the analysis of social
groups centred around her concept of joint commitment. Susan Hurley and
Robert Sugden offer contrasting perspectives on team reasoning. Models
of the evolution of teamwork are proposed by David Myatt and Chris
Wallace, Peter Andras and John Lazarus, and Andrew Coleman. There is

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an overview by Wiebe van der Hoek, Marc Pauly and Mike Wooldridge of logical systems worked out for teamwork for computer science purposes, and an article on robot teamwork by Jeremy Wyatt, Yoshiyuki Matsumara and Matthew Todd. The empirics comprise experiments on group versus individual brainstorming by David Wilson, John Timmel and Ralph Miller, an overview of experiments on group identity and social norms in social dilemmas by Christina Bicchieri, and a survey of results on effective teamwork by Carol Borrill and Michael West. Four chapters have rather technical content, but the main ideas are mostly presented in a manner accessible to those without a mathematical background.

The volume contains much to surprise and illuminate. The reader will learn from Sugden's article that some economists are prepared to countenance quite strong notions of collective agency in response to coordination problems, despite the discipline's orthodox stance of strict methodological individualism. Bicchieri's piece shows, *inter alia*, that the concept of a social norm has been analysed with a rigour that should appeal to social scientists. It is therefore not an empty, non-explanatory concept as some sceptical economists claim. One learns from Van der Hoek *et al.*'s survey that logics of teamwork have reached an advanced stage of analysis and have concrete application in multi-agent systems. There is an interesting simulation result in the robotics chapter. In football teams bred by genetic algorithms, rewarding team members equally for goals led to specialization, with players taking differentiated roles, for example in attack and defence. Alternatively, reward those that score and every player tries to be a striker. Yet the advice to reward team members equally for a group's output runs contrary to received economic wisdom because of the free-rider problem.

Nonetheless, a sceptical reader might question the value of assembling such a variety of approaches. Indeed, it is far from obvious that there is a core concept of teamwork shared among the disciplines involved. There are cases in which the disciplines seem to have little or nothing in common. For example, Mayatt and Wallace's contribution is in the tradition of evolutionary game theory, which assumes that agents have very primitive cognitive capabilities. In the model, agents only rarely change their behaviour even if it is irrational, and may also switch from rational to irrational actions. Coleman's article examines 'cooperation' in a context in which agents cannot even know that their actions affect each other. At the opposite end of the spectrum is Hurley's article, according to which team agency involves sophisticated abilities to discern the intentions behind others' actions, and even the question of whether to reason as an individual or team member ultimately falls within the scope of rational choice theory.

To some extent though, the diversity is unified around a basic divergence in academic approaches to teamwork, with many of the chapters falling relatively clearly on one side or the other. The dividing

issue is the extent to which episodes we regard as teamwork really transcend other forms of action. Approaches to teamwork seem either to be collectivist, according to which people's membership of a team radically alters their mindset and behaviour, or individualist according to which participation in teams takes place for an individual's own reasons and does not transform their agency. There is a sense that the two approaches skirt around each other without often engaging directly. There are at least two reasons why this engagement ought to take place.

Firstly, the approaches offer alternatives for artificial teams, but the chapters dealing with computer science do not explicitly explore the collectivist team reasoning model. For example, consider two robots that have to balance a ball on a tray. One might program each robot to tilt the tray slightly upwards if the ball is approaching, downwards if it is going away. Here we have individuals reacting to each other. However, suppose the tray is curved so that its centre is higher than its edges, making it more difficult to achieve balance. Departures from the best possible movements are now more costly. In this case, it might improve matters to use team reasoning, whereby each robot calculates an optimal set of actions for both to perform and does its part. Then each anticipates the other. Next, suppose there are many balls. They will have to coordinate on which to save, prior to coordinating movements. Whether a team can solve a problem will in general depend on how they are to coordinate, a matter which in humans seems to depend partly on cultural and physiological contingencies. Since it does not incorporate means of coordination, the 'logic of teams' surveyed by Van der Hoek *et al.* seems to be a logic of plurals which is prior to a fuller analysis of teams' capacities.

Secondly, there is a problem raised by the coexistence of the two approaches to human teams: it risks importing a dualism into the analysis of action. For if people lose themselves in teams we will not be able to analyse decisions to enter and withdraw from them. Whilst this matter does not receive explicit attention, it may lie behind the opposite extremes Hurley and Sugden adopt regarding rationality. Sugden appears to hold that whether teams' reasons for action are reason-providing for individuals depends on which logic an individual chooses to endorse, a subjectivism about rationality which runs counter to his, and Bacharach's, project of rationalizing coordination (see Bacharach 2006). Whilst for Hurley it seems that individuals should be able to reason themselves into and out of teams, but the perspective from which such reasoning could operate is not clarified.

The general standard of the collection is high. There are places however, where the reader may wonder at the peculiarity of what is outlined. In Borrill and West's overview of the empirical psychology of teamwork, for example, significant research effort sometimes seems to be devoted to investigating a tautology, such as whether individuals'

personalities or training opportunities affect team performance. This brings to mind Wittgenstein's remark about psychology combining empirical methods and conceptual confusion. But even here there are less obvious results such as that the contribution of a high ability team member appears to be greater when other team members also have high ability.

In conclusion, the breadth of material covered and overall quality make this a very worthwhile collection for anyone interested in teamwork. The downside is that it provides a case study of the fragmentation of the social sciences. Whilst this is at times frustrating, the picture is doubtless accurate. Greater integration is surely furthered by efforts such as this to bring related fields together, though, and, as I hope to have indicated, there is much material here capable of cross-fertilizing different disciplines.

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REFERENCE

Bacharach, Michael. 2006. *Beyond Individual Choice*, ed. Nathalie Gold and Robert Sugden. Princeton University Press.

Satisficing and Maximizing: Moral Theorists on Practical Reason, edited by Michael Byron. Cambridge University Press, 2004, 245 pages.

Is only the best action good enough to choose? Maximizers would answer 'yes', and tell us to always choose the best action, whereas satisficers would answer 'no' and tell us to choose an action that is merely good enough. This way of putting things is still very rough, since it is not clear what 'good enough' means. It is one of the virtues of this book that it shows how ambiguous the notion is. In fact, many of the contributors of this book argue that on a natural understanding of 'good enough' even maximizers can happily accept that it is sometimes permissible to do what is good enough. Another virtue of this book is that it shows that the notion of doing what is good enough is not just relevant to rational choice narrowly conceived. In the hands of the contributors, the notion of 'good enough' is used to illuminate the virtue of moderation, the notions of supererogation, 'demandingness' and incommensurability, the relation between well-being and prudential choice, and the distinction between deontology and consequentialism.

In this short review, I will not be able to discuss all these issues. I will mainly focus on what I take to be the central question: Can satisficing be seen as a plausible alternative to maximizing? This means that I will