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Commentary

The Research Derby: A potentially important tool for bridging interdisciplinary boundaries

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Introduction

In their paper, Favaro et al. (2013) introduce a novel approach to collaborative scientific research. The 'Research Derby' (Favaro et al. 2013) is a high-intensity, 24-hour workshop with the ambitious aim for participating teams to present a paper, which with minimal further effort, will be fit for publication. Whilst it is an ambitious target, it is also achievable, and an example is provided of a publication (Phillis et al. 2013) that came as a direct result of the inaugural Research Derby, held at Simon Fraser University, Canada in 2011.

Interdisciplinary research, described here as all types of crossings between or among disciplines (Lele and Norgaard 2005), for the purposes of conservation has been much called for over the last decade or so (Mascia et al. 2003). This has mostly resulted from a realisation that attempts to mitigate global impacts such as climate change and biodiversity loss require collaboration across disciplines (Hicks et al. 2010). Other examples can be found in ecological research within the urban landscape, which necessarily fuses the natural and social sciences (Mcintyre et al. 2000, Lowe et al. 2009). It is also recognised that collaboration amongst disciplines can encourage creativity and encourage novel thought processes and ideas (McWilliam et al. 2008). However, numerous commentaries have expressed needs that must be met in order to carry out successful interdisciplinary research (e.g. Campbell 2005, Fox et al. 2006, McWilliam et al. 2008, Lowe and Phillipson 2009, Hicks et al. 2010). How a Research Derby can help meet these needs is now discussed.

The potential for a Research Derby to encourage interdisciplinary research

The clear strengths of the Research Derby concept lie with its finite time span and pressurized environment towards a clear collaborative product. Consequently, obstacles to interdisciplinary research posed by funding and researcher availability (Hulme and Toye 2006, Lowe and Phillipson 2009, Brouwers et al. 2013) are largely side-stepped as to host a Research Derby relies more upon participant motivation than, for example, equipment provision and venue hire, and is necessarily time-constrained in order to create the 'pressure-cooker' atmosphere. Furthermore, issues surrounding differing publishing expectations (Campbell 2005) can be 'ironed-out' *a priori* and a publishing protocol can be agreed upon during a pre-event group meeting using the guidance provided by Favaro et al. (2013). To some extent also, it may be possible to reconcile differences in terminology and research practice across disciplines in order to find a common language (Boulton et al. 2005, Campbell 2005, Brouwers et al. 2013) whilst establishing a research theme, or questions to be addressed. However, the degree of success of a Research Derby event to encourage interdisciplinary research may well reside in the breadth of disciplines incorporated.

Figure 1 outlines the academic organisational structure within the University of Birmingham (University of Birmingham 2013). The Derby example provided by Favaro et al. (2013) of the $Earth_2Ocean$ research laboratory is pitched at the equivalent level of 'Research Group'. From personal experience, in an

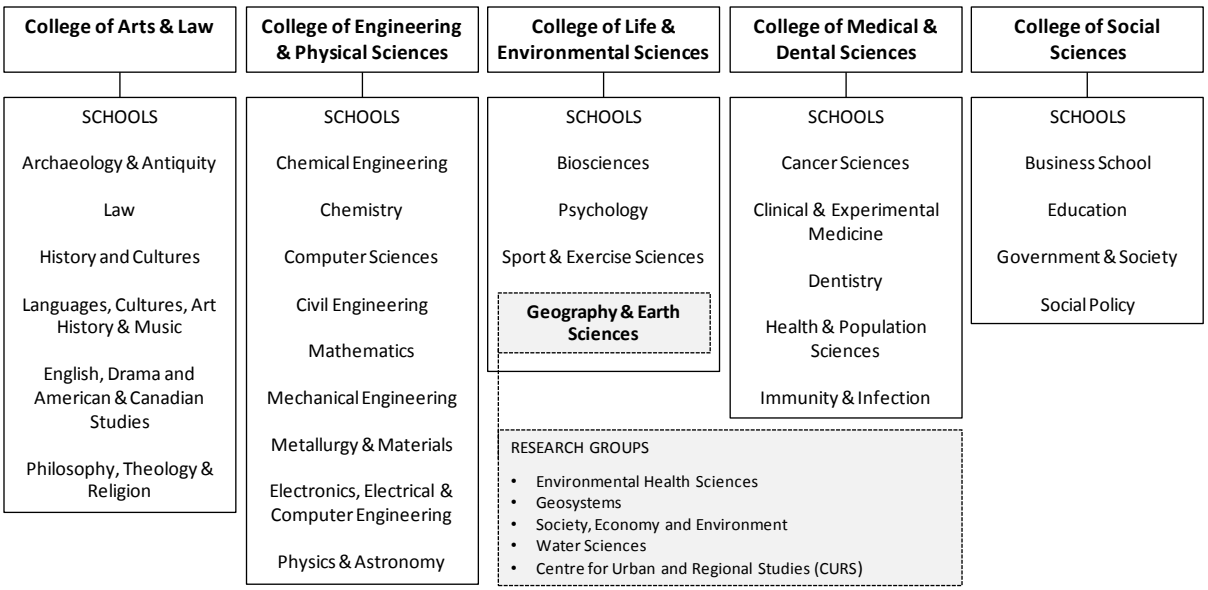

Figure 1. The University of Birmingham academic college's organisational chart (adapted from University of Birmingham (2013)

attempt to gain support for a Research Derby at the University of Birmingham, advice was given to invite participants from across the School of Geography and Earth Sciences in order to fit within the academic framework. Consequently, potential attendees may be sourced from diverse research backgrounds, which whilst intriguing, would undoubtedly impinge upon the time required in order to establish an appropriate research theme and to reconcile aforementioned disciplinary differences, thereby invoking the observations by previous authors (Hulme and Toye 2006, Brouwers et al. 2013). Conversely, even if a Research Derby was pitched at the level of school, potentially synergistic research interests may be missed (e.g. between biosciences and geography and earth sciences research groups). Thus, some careful consideration is required on the part of a Research Derby facilitator in order to balance the interdisciplinary nature of the event with the time-constraints imposed.

The value of a Research Derby for early career researchers (ECRs)

Favaro et al. (2013) correctly identify the potential value of a Research Derby for the reconciliation of independent research with the benefits of teamwork and collaboration. To add to this, due to the continued drive to publication following a Research Derby there remains a longer-term collaboration incentive to participating ECRs. This is a distinct advantage over traditional workshop and conference exercises, which do not typically retain a formal presence beyond the event itself, only indirectly through networking activity which may have occurred. Similarly, an intensive introduction to interdisciplinary research at an early, more informative stage of an academic career may preclude, or develop with, traditional disciplinary concepts (or prejudices) that have till now compromised interdisciplinary research (Campbell 2005, Lele and Norgaard 2005). Alternatively, participating senior academics may benefit from being exposed to researchers practicing in unfamiliar disciplines and gain a fresh insight into their own long-established and future interdisciplinary links. Finally, for the ECR, the Research Derby framework provides a scalable process, as each of the steps towards successful collaborative research is taken on a macro-scale; it is a 'learn by doing' approach.

The use of a Research Derby as a complimentary tool towards collaborative research

In an academic setting, ECRs are considered to be an under-utilised resource in multi-disciplinary research. This is attributed to fixed-term contracts, lack of opportunities and institutional strategies (Sobey et al. 2013). To this end there have been several initiatives designed to improve interdisciplinary learning and research opportunities. One such example piloted a teacher network which, *via* a network facilitator encouraged cross-fertilisation of teaching and teaching material between several disciplines including zoology, business and marine science (Pharo et al. 2012). Secondly, in an active research setting at the University

of Southampton, Sobey, Townsend et al. (2013) have developed University Strategic Research Groups (USRGs) in order to consolidate ECRs into interdisciplinary research efforts. For the latter a conference was organised to include lectures, surgeries, collective sessions and speed-networking sessions. In both instances, a Research Derby could present both a complementary training tool and/or a final session to cement lessons learned.

Conclusion

It is widely recognised that in order for ecologists to meet global challenges, new approaches are required in order to cross traditional disciplinary boundaries (Turner and Carpenter 1999). Following on from this, solutions are needed to improve the success and longevity of collaborative and interdisciplinary research (Brouwers et al. 2013). The Research Derby concept (Favaro et al. 2013) could prove a useful tool with both of these objectives in mind, particularly as a mechanism to kick-start collaborative and interdisciplinary ventures. An open-access, central repository of Research Derby events detailing disciplinary backgrounds and publications successes is highly recommended in order to fine-tune future Research Derby events such that they may be targeted at the appropriate audience and to maximise their effectiveness.

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