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The paradox of collaboration: a moral continuum

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ABSTRACT

Collaboration is a modern mantra of the neoliberal university and part of a discourse allied to research performativity quantitatively measured via co-authorship. Yet, beyond the metrics and the positive rhetoric collaboration is a complex and paradoxical concept. Academic staff are exhorted to collaborate, particularly in respect to research activities, but their career and promotion prospects depend on evaluations of their individual achievements in developing an independent body of work and in obtaining research funding. This central paradox, among others, is explored through analysing collaboration as a moral continuum. At one end of this continuum are other-regarding interpretations of collaboration involving the free sharing of ideas for the common good of scientific advance (*collaboration-as-intellectual generosity*), nurturing the development of less experienced colleagues (*collaboration-as-mentoring*) and disseminating knowledge claims via a range of scholarly platforms (*collaboration-as-communication*). However, other forms of collaboration are essentially self-regarding illustrating the pressures of performativity via increased research output (*collaboration-as-performativity*), through practices that reinforce the power of established networks (*collaboration-as-cronyism*) and the exploitation of junior researchers by those in positions of power and seniority (*collaboration-as-parasitism*). Whilst collaboration has always been at the heart of academic labour its paradoxes illustrate how individual and collective goals can come into conflict through the measurement of academic performance and the way in which such audits have perverted the meaning of collaboration.

AQ2 Introduction

In global higher education the word 'collaboration' has become a modern mantra. It is symbolic of the positive benefits of working with others for the advancement of science through the pooling of resources and expertise. Collaboration is widely regarded as the key to innovation in a mass participation society (Leadbetter, 2009). The benefits of collaboration include sharing new perspectives across national and disciplinary boundaries, pooling scarce resources and as a means of mentoring inexperienced academics or research students. Reflecting this discourse, universities, funding agencies, industry and policy-making bodies invoke collaboration as an essential component of modern academic

life. In response to this discourse research collaboration among academics worldwide has increased significantly allied with performance measures directed at increasing rates of publication output (Postiglione, 2013). Structures have been put in place to support research collaboration, usually across national boundaries, through the development of research networks and centres of excellence promoted by national funding agencies and the European Commission (Abramo, D'Angelo, & Di Costa, 2009; Griffin, Hamberg, & Lundgren, 2013). These initiatives are viewed as doubly beneficial in building cross-national critical capacity to tackle big research problems and provide economies of scale that promote administrative efficiency.

An added virtue of collaboration here is the way in which it is seen as a socially respon-sible means of bringing together academics to address research areas that are regarded as critical to the future of global society, such as climate change (Parker, Vermeulen, & Penders, 2010). This is the ideal of disinterestedness, as identified by Merton (1973b), where scientists come together in pursuit of discoveries that benefit mankind rather than personal glory. University-wide research initiatives and strategies seek to bring together resources in niche areas or address institutional research themes such as the four 'grand challenges' of global health, sustainable cities, intercultural interaction and human wellbeing identified by University College London (2016).

At the faculty or departmental level, collaboration between academics is encouraged via the creation of research centres or 'clusters' directed, in part, at encouraging the growth of research cultures and mentoring practices (Lucas, 2009). University–industry partnerships are seen as a further way of increasing competitiveness and wealth creation (Barnes, Pashby, & Gibbons, 2002) whilst others see collaboration as a democratic and inclusive concept enabling academics, students and practitioners to become 'co-producers' of knowledge in a partnership model of working (Healey, Marquis, & Vajoczki, 2013; McCul-loch, 2009). In short, collaboration is generally assumed to be 'a good thing' that warrants encouragement (Katz & Martin, 1997). The unproblematic nature of collaboration is con-veyed by Chrislip and Larson's (1994, p. 5) widely cited definition in which they refer to a 'mutually beneficial relationship between two or more parties who work together toward common goals by sharing knowledge, learning, responsibility, authority and accountabil-ity for achieving results'.

Yet, collaboration is a paradoxical and potentially more problematic concept than received wisdom might suggest. The Oxford English Dictionary provides two contrasting definitions of the word 'collaboration'. The first is the one that is probably in most common usage and refers to 'the action of working with someone to produce something'. The second definition is less benign and refers to 'traitorous cooperation with an enemy' (OED, 2016, online). Hence, the word collaboration is a contronym inasmuch as it can have opposite or contradictory meanings depending on the context in which it is used. Symbolic of this tension is the way that the word collaboration is sometimes juxtaposed with that of competition (Van Den Besselaar, Hemlin, & Van Der Weijden, 2012). In a higher education context this tension is played out in the way in which academic staff are exhorted to collaborate, particularly in respect to research activities, yet their career and promotion prospects depend increasingly on evaluations of their individual achieve-ments as authors and in obtaining research funding. Academic careers and reputations are built on the number of papers that academic staff have to their name (Van Den Besselaar et al., 2012). Although collaboration might play a significant role in publication and

research projects, being a first named author (typically first named in humanities and social science, and last named in natural sciences) or project principal investigator continues to be judged as a critical measure of a successful academic career.

These contradictions or paradoxes are evident in the manner in which the word 'collaboration' is used as part of the sacred vocabulary of the measured university. This vocabulary includes other under-examined yet widely asserted mantras such as collegiality that have also attracted critical scrutiny in this journal (Kligyte & Barrie, 2014). The complex nature of academic collaboration requires a similar level of interrogation. Subsequent analysis will identify six forms of collaboration comprising a continuum of moral permissibility stretching from *collaboration-as-intellectual generosity* to *collaboration-as-parasitism*. Constructing a moral continuum is a feature in evaluating a spectrum of ethical positions in representing controversial social issues where polar opposites exist, such as warism and pacifism (Cady, 1990) or in arguments concerning the moral merit of biotechnology projects (Fiester, 2007). Here, it is deployed as a means of illuminating the moral complexities of collaboration beyond the manner in which it is represented as an unproblematic concept in the 'measured' university. This phrase may be understood as about the increasing use of data as a mechanism for judging quality in higher education at the micro, meso and macro level.

Problematising collaboration

There are numerous forms of collaboration referred to in the literature involving university academics working with a range of different partners including their colleagues, students and research assistants (Subramanyam, 1983), with international colleagues (Postiglione, 2013), and in partnership with those from private industry (Barnes et al., 2002; Godin & Gingras, 2000). Collaboration can involve the sharing of facilities, such as equipment and laboratories, vital for experimental science; research data; socialisation of researchers across national boundaries and co-operation between institutions on the basis of spatial proximity (Rambur, 2009). Most published studies concerning collaboration are focused on analysing its prevalence in 'scientific research' (e.g., Subramanyam, 1983). This phrase is normally used as a short hand for 'physical and natural scientists as well as engineers' (Lee & Bozeman, 2005, p. 695). Hence, studies on collaboration in the biomedical sciences (e.g., Bordons, Gomez, Fernandez, Zulueta, & Mendez, 1996) are much more commonly reported in the literature than collaborative work in the social sciences. It follows that these papers are normally published in journals associated with the physical and natural sciences as well as those devoted to the quantitative analysis of 'scientific research', such as *Scientometrics* and *Social Studies of Science*. As a result, most published papers about collaboration use a quantitative method for measuring academic collaboration based on multiple or co-authorship where two or more persons publish as authors together (Smith, 1958). International collaboration is normally defined as occurring where at least one author contributing to a publication is based in a different country to a co-author, although more sophisticated measurements have also been suggested (Katz & Martin, 1997).

Whilst using bibliometric evidence of co-authorship as a proxy for collaboration is a neat and consistent means by which to carry out quantitative analysis it sheds little light on the complex social and political dynamics underlying this phenomenon.

Moreover, reliance on co-authorship data as a proxy for collaboration excludes those who may have played a role in a collaboration but may have been excluded from the list of published authors of an academic paper. Hence, whereas quantitative methods are used as a way of measuring collaboration, however crudely, few studies problematise the nature, meaning or effects of collaboration between academic researchers. A small number of qualitative studies, often based on interviews, have been carried out though (e.g., Carr, Pololi, Knight, & Conrad, 2009) and have helped to enhance understanding of the micro-politics of collaboration. The literature consists of papers concerned with the *measurement* of collaboration via the use of quantitative methods and other studies focused on analysing the *effects* of collaboration mainly via qualitative methods (Abramo et al., 2009, p. 156).

Collaboration as multiple or co-authorship is the dominant definition. However, other understandings are apparent within the broader literature. Collaboration may also be interpreted more broadly as the use of prior (published) knowledge (Subramanyam, 1983) enabling others within the wider community of scholarship to build on the understandings of others. A more active, or intellectually robust, definition of collaboration is provided by Popper who describes it as 'friendly hostile co-operation' in an academic context (Popper, 1994, p. 7). He argues that criticism about competition between academics as well as about testing out knowledge claims rigorously in everyone's interest. Popper used the phrase 'inter-personal criticism' within a community of 'science', referring in the European sense to all academic disciplines, as a means of advancing the development of intellectual ideas and in seeking out the truth as a shared pursuit. This argument for the beneficial effects of collaboration has much in common with Merton's identification of norms aimed at the maintenance of the moral infrastructure of academic life (Merton, 1973b).

There are comparatively few papers that consider the emotional and social politics of collaboration, partly due to the focus of most of the literature on the quantitative measurement of publication via co-authorship. This may be because there is a long tradition of presenting scientific enquiry as personally dis- or uninvested practice rather than one charged with human emotion involving 'relations of power, of dependency, of loyalty, of employment, of friendship, of enmity – and a host of other factors that are rarely discussed in the context of research collaboration … ' (Griffin et al., 2013, p. 1). The realpolitik of collaboration suggests that academics need to be thought of as what may be termed 'socio-emotional entities' (2013, p. 1) rather than disinterested scientists.

This realpolitik is revealed in a number of papers where power relations between collaborators are frequently the source of discussion. Inequality between collaborators in terms of power and status lie at the heart of this literature. Collaborative research can be seen as increasing competition between researchers (e.g., Van Den Besselaar et al., 2012), as reinforcing gender inequality especially in international collaboration (Uhly, Visser, & Zippel, 2015) and hiding conflicting research priorities between researchers (Garrett-Jones, Turpin, Burns, & Diment, 2005). Early career researchers can experience collaboration as *loss* of authorship, either in respect to giving up authorship entirely to other more senior colleagues or ceding authorship credit in some form (Müller, 2012). The other side of the coin is represented in research by Lee and Bozeman (2005). This reveals that where collaboration with inexperienced or newer academics occurs it can reduce the productivity of senior investigators. Here, the mentoring relationship is

described in terms of a 'tithe' (or tax) on experienced researchers that can act like a 'drag on the productivity of more experienced researchers' (Lee & Bozeman, 2005, p. 674).

This brief review of the literature on academic collaboration gives an insight into the complexities of collaboration. Broader work on collaboration processes in organisational life show that conflict, as opposed to collaboration, is a staple feature of working relationships and excessive emphasis on the maintenance of harmony in groups can be the cause of harmful effects, such as 'groupthink' (Janis, 1971). This occurs when there is an excessive emphasis on achieving consensus in groups isolating members from other perspectives. Indeed, it should not be assumed that conflict is always 'bad' whilst collaboration is 'good'; creative conflict, it has been argued, can result ultimately in better decision-making (Lishman, 1983). Naïve assumptions commonly made about collaboration include altruism on the part of those taking part and rationality in the process of collaboration itself (Booth, 1983).

Collaboration as a moral continuum

It is clear that collaboration is a slippery and ill-defined concept representing a range of behaviours and assumptions. The *effects* of collaboration are multiple and complex and need to be understood as involving moral acts, to do good by seeking to selflessly support others in the creation and development of knowledge, and disseminating empirical and conceptual ideas widely, as well as to do harm to others through behaviours involving the abuse of power and authorship theft. This section of the paper will explore six forms of collaboration in academic life represented by a continuum of moral permissibility based on the distinction between self-regarding and other-regarding behaviour. Self-regarding (or self-oriented) behaviour refers in this context to the personal and career benefits that can be derived from collaboration that, at extreme, can result in abuses of power and position. Other-regarding (or other-oriented) behaviour is focused on the way in which collaboration is understood principally as about the exercise of academic duty and friendship in academic life to advance the interests of less experienced researchers and the wider pursuit of knowledge as a common goal for the benefit of society. In practice, scholars are often engaged in several forms of collaboration across the continuum at the same time responding to performative pressures to get involved in multiple forms of collaboration. This might include publishing more with others, advising inexperienced colleagues who are making research funding bids or producing research reports or academic papers based partly or largely on work carried out by research assistants (Table 1).

Collaboration-as-intellectual generosity

Academic life is now institutionalised inasmuch as researchers belong, very largely, to higher educational establishments, usually universities. In the nineteenth century there were few universities and, thus, correspondingly small numbers of university academics. The commitment of such institutions was principally to teaching rather than research in most contexts. As a result those who undertook serious scientific research were rarely affiliated to a university. A transformation has taken place subsequently through the exponential growth in the number of universities and in their roles as research as well as teaching institutions. This means that intellectual and academic friendship is no

Table 1. Collaboration as a moral continuum.

Collaboration-as	Definition	Examples
Intellectual generosity	Sharing ideas freely with others for the advancement of science as a common good	Free exchange of unpublished ideas and data
Mentorship	Working with less experienced colleagues to encourage and support their development	Giving feedback on work-in-progress
Communication	Disseminating knowledge claims via a range of scholarly platforms	Presenting work-in-progress at a conference
Performativity	Working with others in order to increase research output or research bidding success and meet performance targets	Co-authorship
Cronyism	Practices that reinforce the power of established networks and close academic communities to new entrants involving expectations of reciprocal gifts and favours	Citation rings Unbalanced reviews Inaccurate references
Parasitism	Exploitation of junior researchers by senior academics abusing their power and hierarchical authority	Gift authorship

longer free from institutional loyalties, complicating the competitive forces of such affilia-tions (Emmeche, 2015).

The nature of academic friendship in the nineteenth century may be illustrated by refer-ence to Charles Darwin's huge correspondence with many fellow botanists and other cor-respondents, from around the world, estimated to number around 2000. These included significant intellectual colleagues such as Joseph Dalton Hooker, Asa Grey and William Bernhard Tegetmeier. This is a high-profile illustration of collaboration undertaken well before the vast majority of academics or scientific researchers inhabited universities. It is also an example of *collaboration-as-intellectual generosity*, the free sharing of unpub-lished ideas between close academic colleagues in a spirit of good will and the common pursuit of truth in science.

This is perhaps the most idealistic version of the purpose of collaboration and is under-scored by Merton (1973b) in his formulation of the acronym C.U.D.O.S. to represent the norms or values of research science. The first of these norms – C for communism – refers to the free sharing of intellectual property among researchers for the common good. Merton saw communism as a moral imperative along with the need for organised scepti-cism in subjecting all knowledge claims to the critical scrutiny of peers. This value shares much in common with Popper's stance on the importance of 'friendly hostile co-oper-ation' (Popper, 1994, p. 7).

It is important to stress the potentially self-sacrificing nature of *collaboration-as-intel-lectual generosity* as it implies that free sharing of ideas is a critical moral imperative and overrides considerations of personal glory that can come when individuals are associated with discoveries or advances in knowledge. The instinct of many, especially given competi-tive forces, is, as reported by Rambur (2009), on the basis of interview data for scientists to 'want to protect their ideas and their data … it is our capital' (respondent quoted in Rambur, 2009, p. 86). However, at this other-regarding end of the moral continuum the duty of the academic researcher is to work in collaboration with others, wherever they might be, in seeking answers to questions that could provide important benefits to wider society. Who receives the credit for such advances is beside the point. This is a point underscored by Weber (1973, p. 61) who offers a sobering reality check for those academics that regard research as an egotistic pursuit by arguing that every individual accomplishment is likely to be rapidly outdated or surpassed by others. This, according

to Weber, is something that academics need to accept, and perhaps even celebrate, as part of a vision of collaboration based on the need to 'serve science' (Weber, 1973, p. 61).

Yet, even though collaboration-as-intellectual generosity is the idealised behavioural norm by which science advances, disputes about who deserves credit and allegations with regard to the lack of acknowledgement of others are legion in academic life with many high-profile examples such as the discovery of the structure of DNA, attributed to Watson and Crick but without, some argue, adequate recognition of the contribution of Rosalind Franklin's data (Sayre, 1975).

Collaboration-as-mentorship

A large number of authors link the purposes of collaboration to mentoring in some form (e.g., Lucas, 2009; Tierney, 2008) often implying or formally stating that such an activity is an academic duty or an inter-generational responsibility (e.g., Macfarlane, 2007; Rambur, 2009). Hence, mentoring is usually represented as an other-regarding act in terms of the moral continuum. There are a range of approaches to mentoring, including coaching, sponsorship and role modelling, represented within the literature. Even though the mentor is conventionally thought of as a senior colleague they may equally be a junior or a peer or a support group consisting of individuals occupying a range of roles and offering a wide range of expertise.

Mentoring is widely regarded as highly beneficial for doctoral students and other more junior faculty especially where this leads to publication (e.g., Long & McGinnis, 1981). Bozeman and Corley (2004, p. 609) directly identify the beneficial role of collaboration-as-mentoring as traditionally understood when they state that 'senior colleagues working with graduate students, post-docs and junior untenured colleagues is likely to pay dividends for whole scientific fields as new generations of scientists are socialized, develop skills and develop network ties'. Collaboration-as-mentoring may be further linked to a growing literature around supporting women, and other historically disadvantaged groups within higher education, in forging their academic identity and aiding their career advancement (e.g., Driscoll, Parkes, Tilley-Lubbs, Brill, & Pitts Bannister, 2009; Wasburn, 2007).

There is a tendency though for much of the literature in this area to either remain silent or ignore the unproblematic nature of unequal power relationships between senior faculty and more junior academics or research students (see collaboration-as-parasitism section). Being generous in sharing or ceding authorship credit to others is sometimes seen as a positive virtue of collaborative relationships but it may also be interpreted, less positively, as a gifting behaviour that fails to accurately represent relative levels of authorial contributions (Macfarlane, 2015).

Collaboration-as-communication

Academics in the normal course of their practice seek to share, publicise and disseminate their research activities in a variety of ways through the traditional medium of journal articles, books, chapters, reports, artefacts and conference papers and more contemporary forms of communication associated with the worldwide web and social media outlets. In a sense, academics are collaborating simply by seeking to share and communicate ideas

bringing them to the attention of others including fellow scholars. At its most fundamental, all academic research relies, to a greater or lesser extent, on 'standing on the shoulder of giants'. This phrase, used by Issac Newton in a letter to an academic rival in 1676, is an oft-quoted metaphor for expressing the debt owed by current generations of academics to those who have attempted to answer questions and tackle problems before them. In many respects the whole edifice of academic research is based on a collaborative ethos that requires the acknowledgement of intellectual debts to others as a feature of the virtue of humility (Macfarlane, 2009).

The act of publication can in itself be classified as an unselfish act inasmuch as it may result in the sharing of data and ideas that can enable others to resolve problems or find answers to research problems, in turn.

Collaboration-as-communication is also about an opening up of research to critical interrogation by others. To some extent this demands courage to share doubts, preliminary findings and methodological problems with others at an early stage in research work, often at academic conferences, rather than withhold information that might be of benefit to other scholars within the same field.

Collaboration-as-performativity

The pressure on academics to increase their productivity is directly related in an Australasian and UK context to the introduction of research evaluation. Institutions use a variety of interventions in an attempt to increase rates of publication (McGrail, Rickard, & Jones, 2006). In the UK, the Research Assessment Exercise, dating from the mid-1980s, is widely regarded as a watershed directly attributable to increasing expectations in respect to the quantity of academic output. Similar audits of research quality have been instituted in other international contexts such as Australia, New Zealand and Hong Kong and are widely perceived as a manifestation of neoliberal policies in respect to higher education. The emergence of performance management in universities in recent years is part of a wider trend across the public sector designed to maximise efficiency and encourage entrepreneurial freedom based on free market principles (Marginson & Considine, 2000). Whereas scholars in the humanities and social sciences might have formerly produced around four or five major works in the course of an academic career, the pressure of research assessment means that their productivity has now become 'more or less persistent' leading to the attendant growth of new journals (Barnett, 2003, p. 113).

Collaboration is seen as one of the primary means by which academics can meet the demands to meet much higher levels of research output. A 20-year study of publishing patterns among university academics across a wide range of subjects concluded that the scientific article in international journals is now the dominant form of output, the number of publications per academic staff member has increased and co-authorship has become more common with levels in the social sciences starting to resemble patterns in the natural sciences (Kyvik, 2003). Other studies have concluded that academics see collaboration as leading directly to increased productivity (Carr et al., 2009). One of the other purposes of collaboration is to increase opportunities for joint research bidding particularly for funds that may require a critical capacity of academics from several different contributing disciplines (Lucas, 2009).

Tensions can arise within collaborations though due to the need for tangible outputs, often in the form of a publication of some type. Here the collectivist nature of collaboration and the individual nature of advancement within an academic career can come into conflict. It is widely acknowledged that gaining promotion requires 'an independent body of work' (Carr et al., 2009, p. 1447). This is perhaps the central paradox of collaboration as academics navigate the twin demands of collaboration and the 'insistent individualism' of the measured university (Bennett, 2008, p. 142). Despite the rhetorical strength of collaboration as a modern mantra of higher education it remains true that 'the more papers a scientist can put his/her name on, the better this is for ones' reputation and career' (Van Den Besselaar et al., 2012, p. 263). Being the first named author, at least in many humanities and social science disciplines, is a key symbol of prestige. Bourdieu (1988, p. 79) referred to it as an example of the 'symbolic capital of renown'. Determining who should be named as the first author can become a hotly disputed issue between collaborators. Even though guidelines for authorship order do exist on an international basis, there is little evidence that academics are aware of them or use them in practice (Macfarlane, 2015).

Whilst collaboration can be seen simply as a positive boom for rates of publication attitudes can vary according to the career stage of the individual academic. In their study of collaboration in academic medicine, Carr et al. (2009) found that early career researchers regarded the pressure to develop an independent body of work necessary for individualistic achievement in academic life as a 'deterrent to collaboration' (p. 1447). When early career or academics with less renown publish with more experienced or renowned colleagues the so-called Matthew effect may come into play. This means that well-known researchers tend to get more credit than less well-known authors in multi-authored publications regardless of their actual level of contribution (Merton, 1973a). It has also been suggested that certain types of highly time-consuming collaboration can have a negative effect on productivity rates, at least in the short term. Rambur (2009) argues that academic faculty involved in large-scale international collaborative projects will tend to have lower levels of research output due to the intensive demands in successfully initiating and completing it.

Collaboration-as-cronyism

Cronyism is a word associated with giving benefits to friends and other close associates without regard to the claims of merit judged by qualifications, experience and talent. Relationships involving cronyism are based on gifts and favours within networks to trade privileges and opportunities without regard to merit. In an academic context, it might imply gaining a professorship, for example, on the basis of a friendship connection rather than the principles of fair hiring and a suitable judgement of relevant achievements (Emmeche, 2015). The provision of an inaccurately flattering reference may also establish a relationship based on indebtedness. In the engineering field, Tang (2000) identifies a number of examples of academic cronyism including racism and sexism in the recruitment process; unbalanced reviews of research funding proposals; unfairness in tenure and promotion processes; and gaining awards, honours and research fellowships on the basis of favouritism. Perhaps unsurprising though there is very limited literature on cronyism in academic life which Emmeche (2015, p. 44) puts down to it being ' … invisible and too difficult to investigate, or simply a taboo'.

Cronyism is closely associated with the (unwarranted) benefits derived from being a member of a particular network and therefore directly related to a form of collaboration. Informally, co-citation is an indicator of close links, in terms of research topic and/or methodology, between authors and it is recognised that self-citation practices and cronyism can inflate citation statistics (Tight, 2009). Cronyism via co-citation is most common among researchers who are former co-authors or where close personal relationships exist between academic colleagues (Gipp, 2013). So-called cognitive cronyism refers to researchers acting favourably towards members of a school of thought to which they belong themselves (Emmeche, 2015). This can also occur within other types of network. Moed (2005) observed that academics in the US excessively cite the work of fellow members of the US academic community compared with scholars from other nations. Citation 'rings' or 'cartels' represent a more formal form of cronyism. This involves a deliberate conspiracy on the part of academic researchers to cite the work of other cronies within a ring or cartel each time they publish, thereby boosting their individual citation rates (Garfield & Welljams-Dorof, 1992). Other forms of cronyism connected with collaboration include review rings where members of the same academic network provide favourable reports in respect to research bids or academic papers submitted to journals.

Collaboration-as-parasitism

Popular understandings of the nature of authorship misconduct tend to be mainly about plagiarism and data fraud. However, whilst these lapses in academic integrity grab the headlines other forms of misbehaviour often connected with research collaboration lie close to the surface in academic life. Collaboration is not necessarily a partnership of equals placing more senior academics and principal investigators in powerful positions with respect to the treatment of junior colleagues. The unbalanced nature of these relationships can play out in respect to gaining authorship credit and in decisions about authorship order. It has long been known that whilst it is common for academics to publish with research students they frequently do not regard them as 'collaborators' (Hagstrom, 1965).

In discussing the virtues of academic life, Nixon identifies the way in which the lack of acknowledgement of significant contributions to the research process by early career researchers, often employed on short-term or insecure research contracts, such as doctoral and post-doctoral students, research fellows and junior academics, represents a shameful stain on the academic profession and is 'a failure of magnanimity' as a virtue (Nixon, 2008, p. 107). Sometimes the lack of acknowledgement accorded to early career and insecure research contract workers is exacerbated by publication timelines. Projects may well have concluded in terms of funding before major publication occurs off the back of the data collected and research contract workers are no longer employed by academic institutions to stake their claim to inclusion within the list of authors or even aware that publication has taken place. The position of junior academics wishing to stake a claim to authorship may be further weakened by needing to rely on a senior colleague to write a letter of recommendation to support the development of their academic career thereby establishing a continuing dependency relationship and sense of indebtedness which may diminish the extent to which they feel able to argue for a co-authorship credit. Parasitical behaviour associated with the conduct of senior academics is reported by Kwok

(2005) who labels it as the 'White bull effect', a phrase meant to convey the pressure or coercion that senior researchers use to get unmerited authorship credit. It is common practice, particularly among educational researchers in parts of East Asia, such as Hong Kong, to determine authorship order on the basis of hierarchy, by placing the senior person first, rather than intellectual contribution (Macfarlane, 2015). It is also widely accepted that supervisors should be gifted authorship by their research students when they publish on the basis of their doctoral thesis (Macfarlane, 2015). Hence, for some junior academics, in particular, collaboration can lead directly to a *loss* of authorship and can threaten the development of their own careers (Müller, 2012).

Conclusion

The emphasis on collaboration in academic life in the neoliberal university is about increasing the efficiency, performance and international impact of academic staff as well as promoting the institution as a good global citizen. However, this performative agenda has started to make some of the other-regarding forms of collaboration, such as collaboration-as-intellectual generosity and collaboration-as-mentoring, appear out-of-step, or even naïve in the measured university. Reward and recognition systems take little account of such forms of collaboration because they are hard to measure in terms of individual output even though they are essential to the nurturing of early career researchers and the advance of science as a common goal for the benefit of wider society. The stress on *measurement* in evaluating academic performance reifies individual achievement over the achievement of collective goals. Crude measurement of collaboration via co-authorship hollows out this concept and leads to greater competition between academics which, in turn, can have perverse consequences for the pace of scientific discovery (Anderson, Ronning, De Vries, & Martinson, 2007).

The moral continuum presented in this paper illustrates the complexities of collaboration in academic life as a self-regarding and an other-regarding activity. Some forms of collaboration are clearly other-regarding in intent whilst some forms are essentially self-regarding and serve to demonstrate the highly competitive nature of academic life. Collaboration-as-performativity, cronyism and parasitism are practices that symbolise the instrumentality and 'insistent individualism' (Bennett, 2008, p. 142) of the measured university. Collaboration is a paradox inasmuch as it is associated with deleterious effects, connected with the social and emotional politics and (un)ethical practices of academic life, as well as potential benefits, such as the free sharing of ideas, increased intellectual capacity and reduced administrative costs.

Whilst collaboration has always been at the heart of academic labour its paradoxes illustrate how individual and collective dispositions can come into conflict (see Jawitz, 2009) through the measurement of academic performance (or collaboration-as-performativity) and the way in which such audits have extended and have, to some extent, perverted the meaning of collaboration. What is measured (e.g., research output and impact), what counts for the most (e.g., papers in leading international journals or high status research grants) as opposed to what is left unmeasured (e.g., service activities) is indicative of the way in which only some forms of collaboration have a direct 'pay-off'. In academic life the burgeoning demands for collaboration within research groupings and in accordance with institutional or nationally determined 'themes' may further potentially conflict with one of

the historic privileges of academic freedom – to individually determine the purpose and direction of their research enquiry as an independent, rather than necessarily collaborative, scholar.

Disclosure statement

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