Advancing research into accounting and the UN sustainable development goals

Paper by:

Jan Bebbington Professor of Accounting and Sustainable Development, Department of Accounting, Birmingham Business School, University of Birmingham, UK. E-mail: j.bebbington@bham.ac.uk

and

Jeffrey Unerman Professor of Sustainability Accounting, Department of Accounting and Finance, Lancaster University Management School, Lancaster University, UK. E-mail: j.unerman@lancaster.ac.uk

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Abstract

Purpose – This paper introduces a special section devoted to accounting scholarship that addresses the UN Sustainable Development Goals (SDGs) and has three purposes. First, we explore the puzzle of a relative absence of accounting related scholarship that address the SDGs. Second, the papers within the special section are introduced and located within streams of existing research and practice. Third, the paper then suggests framings, approaches and/or conditions under which we might see more accounting scholarship in support of advancing the SDGs.

Design/methodology/approach – A structured review of publication patterns in accounting journals over the last five years is undertaken to explore the nature and extent of SDG-related accounting research. These patterns and foundational accounting literature are used to shape a series of observations and propositions underlying the line of argument developed in the paper.

Findings – Despite the SDGs' prominence in the policy world, and the widespread embrace of their utility for shaping understandings of organizational responsibilities, accounting scholars have been slow to engage in SDG motivated research. This gap creates two issues. First, accounting scholarship is less available to the web of knowledge that is being developed about how to enact the ambitions of the SDGs. Second, accounting scholarship is not developing in a way that incorporates SDG related challenges facing organizations. This paper suggests ways in which accounting scholarship can overcome these limitations.

Originality/value – Accounting research on the SDGs is in an early stage of development, despite almost five years having elapsed since their formal adoption. This paper highlights avenues for accounting scholars' engagement with the SDG agenda.

Keywords – Sustainable Development Goals; SDG accounting; Responsibility; Accounting scholarship

Paper type – research paper

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Introduction

It is, to say the least, disconcerting to be writing this paper while the COVID-19 global health crisis is in full flow and where the myriad of interconnections between personal actions, the economy and ecology is more evident than it is in more 'usual' times. Finding a way to personally live well and for communities to flourish within the capacity of the planet to sustain human needs, supported by an economic system that can ensure equitable and sustainable outcomes, is a puzzle that the United Nations Sustainable Development Goals (SDGs) were designed to address, building on a history of similar endeavours (United Nations, 2015). The aim to 'leave no one behind' requires unprecedented collaboration and practice, policy and intellectual innovation as well as a deepening of capability for compassion and its application to the world in which we find ourselves. These ambitions are being pursued on a global political stage where multilateral and bilateral national collaboration is declining, where individuals appear to hold increasingly disparate worldviews and where science (in its broadest sense) as a robust knowledge system is under threat. Moreover, the dual challenges of global climate change and biodiversity loss continue to undermine the potential for human (and other) wellbeing. While at any time the present may seem 'special' to those living through it, 2020 feels like a confluence of critical trends and crises.

As we approach the fifth anniversary of the formal adoption of the SDGs by all countries of the world, the papers in this special section of *Accounting, Auditing and Accountability Journal* provide a glimpse into possible ways in which accounting scholars might contribute to advancing the 2030 sustainable development agenda. The call for papers for this special section was motivated by the strong momentum we had observed among accounting practitioners, professional bodies and policymakers in developing initiatives supporting the SDGs. It was our ambition that the special section would be a focal point for the contributions accounting research could make to strengthening these initiatives and implementation of the SDG ambitions within organizational practices.

Recognizing that researching the SDGs might stretch norms of accounting scholarship, and to help refine the papers ahead of submission, we organized a paper development workshop in August 2018 sponsored by the *Institute of Chartered Accountants in England and Wales* and the *Centre for Social and Environmental Accounting Research*. Nine papers were accepted for discussion at the workshop, which took place some three years after the United Nations resolved to adopt the SDGs. Subsequently, by the time that the submission deadline for this special section passed in January 2019, we had received 21 papers within the scope of the call for papers. As these papers passed through the peer review process, it became apparent that while a range of innovative research was being undertaken into the roles and potential of accounting in relation to the SDGs, relatively little of this research had by that date had sufficient time to be refined to the level of quality expected for publication in *Accounting, Auditing and Accountability Journal*. As a result, only three of these papers form this special section.

We appreciate that high quality research usually takes a long time to plan, execute and refine before it is ready for submission for formal peer review. However, the submission deadline for this special section was over three years after the SDGs had come into force, and more than seven years after they started to be developed through what has been characterized as “one of the biggest consultation exercises the world has ever seen” (Caprani, 2016, p. 102). When proposing this special section, we had assumed that this would have provided sufficient time for research that was started early in the SDG process of development. This assumption was based on a belief that many academics committed to advancing sustainable development would have been aware of the developing SDG agenda from an early stage, and would have embraced opportunities for research that could help to advance the impact of this agenda.

However, from our discussions about accounting and the SDGs at various academic events as late as 2018 (20% of the way through the fifteen year period for achievement of the SDGs), it became increasingly apparent that there were gaps in awareness among the academic accountancy community about the significance of the SDGs to accounting policy and practice. As such, the 21 papers submitted to this special section could be regarded as the avant-garde of SDG accounting research, with many of the papers analysing evidence that can make a considerable contribution to advancing sustainable development once they have had time to mature. This bodes well for a stream of work to emerge in the near future in this as well as other journals.

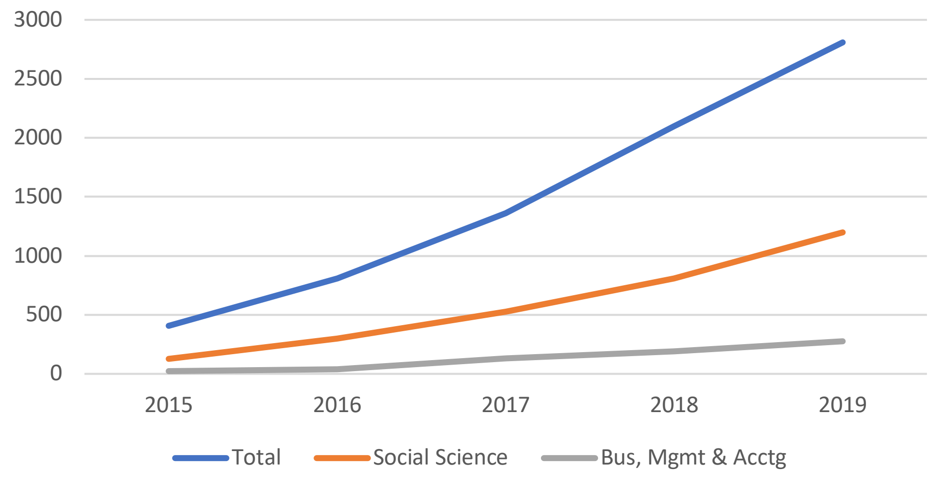
That being said, we will argue in this paper that as a community more broadly, accounting scholars are yet to fully embrace the many opportunities to advance sustainability though engagement with the SDGs and to do so is not straightforward. With this in mind, this paper develops a series of points of connection for all accounting scholars to explore and act upon so that the SDGs can be strengthened by our combined insight: what Hopper (2019, p. 88) describes as “accounting with a global moral compass”.

The paper proceeds as follows. The next section provides a picture of the very limited academic literature addressing accounting and the SDGs in comparison with trends in SDG-related research in other disciplines. It also offers some suggestions regarding why the discipline of accounting appears to have been slow to realize the potential for research into the SDGs. The subsequent section contrasts this limited engagement of the academic community with the rapid development of SDG-related initiatives among accounting policymakers and practitioners. It also uses this background to locate the contributions of the three papers published within this special section. The final section offers some suggestions for how accounting scholars might make links across to the SDGs in ways that will enliven our understanding of accounting and what it means to be an engaged scholar.

Accounting scholarship on the SDGs: a surprising absence

A Scopus based search for papers that contained the terms “sustainable development goals” or “SDG” in the title, abstract or as a keyword (Unerman & O’Dwyer, 2010) was undertaken for all work published between 1 January 2015 and 4 May 2020. Of the 8,653 papers found during this search, 3,475 were published in the area of social science with 805 in the narrower category of Business, Management and Accounting (see Figure 1). While there has been an acceleration in publication patterns across this time period, this has been the slowest for business, management and accounting related academic research fields, where the salience of the SDGs appears yet to be widely appreciated.

Figure 1: SDG-infused publications across fields



The titles of each of the 805 publications identified within the category of ‘business, management and accounting’ scholarship were reviewed in order to appreciate their general nature as well as to scan for accounting journal publications. Journals that had published several papers flagged by their authors as being related to the SDGs included: *Corporate Social Responsibility and Environmental Management*; *International Journal of Management Education*; *Journal of Cleaner Production*; and *Sustainability Accounting, Management and Policy Journal*. Where titles suggested that a paper had a close connection with the concerns of business and management scholars, the abstracts of the papers were read. An initial observation that emerged from this reading is that while papers in these journals provided explicit mention of the SDGs in their abstracts, titles and/or key words, most of the papers reviewed tended to make generic comments about the work in question being relevant to the pursuit of the SDGs. Many, therefore, did not explicitly address how the SDGs might be enacted in organizations, or how accounting and management techniques could be used to further the SDGs in engendering insights for the wider business and management field. It appeared that these papers adopted ‘traditional’ research objectives and approaches and linked these findings in a rather broad and general way to aspirations expressed in the 2030 SDG Agenda.

To explore this perceived tendency further, the search was narrowed to papers that had ‘SDG’ in their title (taken as signalling a greater emphasis on the Goals): 256 papers were in this category. Subsequently, the 25 most cited papers in this group were read and categorized as to their focus. The largest group of papers (11 of the 25) were concerned with how business (with a focus on multinational corporations) and management functions (such as reporting, industrial ecology, international business strategy, entrepreneurship, sharing economy approaches and logistics providers) might evolve in response to the impetus provided by the SDGs. In these papers, the focus was on the particular technique and how it could contribute to elements in the SDG ‘set’. The remainder of the papers were split between papers that examined measurement issues for SDG indicators and data sets (two papers) and policy translation in a variety of settings (five papers). These papers included activities that could be associated with organizational actions (such as urban planning, waste management and public participation in pollution reporting). The final seven papers focused on the links between the Principles of Responsible Management Education and the SDGs, noting that the SDGs might come to provide a unifying paradigm for teaching corporate responsibility and sustainability related topics. These are all relevant and important topics in their own right and our conclusions from this survey should be read with caution given its relatively cursory nature. Regardless, it was our impression that the study as to how the SDGs might be understood and articulated as a holistic point of engagement with business and management scholarship was not as evident as we might have hoped for.

Within accounting journals that might be expected to publish SDG relevant work (namely *Accounting, Auditing and Accountability Journal*; *Accounting Forum*; *Accounting Organizations and Society*; *Accounting and Business Research*; *British Accounting Review*; *Critical Perspectives on Accounting*; *European Accounting Review*; *Management Accounting Review*; or *Social and Environmental Accountability Journal*) the presence of SDG inspired or focused scholarship was smaller still, comprising: Bebbington and Unerman (2018), Hopper (2019) and, outside accounting journals, Avrampou et al. (2019), Al-Htaybat et al. (2019), Niles and Moore (forthcoming) and Di Vaio and Varriale (2020) who provide insights that could be linked to accounting. Taken together, this body of work hardly reflects a field of research that is ready and able to embrace SDG-focused work. This raises the question as to why this would be the case (see also O'Dwyer & Unerman, Forthcoming, who make a similar observation about lack of academic engagement in the area of the Task Force for Climate-related Financial Disclosures reporting).

A number of scholars have documented and puzzled over the lack of engagement by mainstream business and management research with environmental themes or with environmentally focused literatures (see: Diaz-Rainey *et al.*, 2017; Goodall, 2008; Linnenluecke & Griffiths, 2013; Patenaude, 2011). This prior literature suggests that evidence of accounting scholars' relative non-engagement with SDGs is not a novel finding. In addition to documenting this disconnect, scholars have also attempted to explain why this has arisen – with the disciplining effect of expectations about what constitutes 'proper' research signalled as being critically important. This led Hoffman and Jennings (2015, p. 25) to suggest that:

> [There is a tension between the] need to fit the phenomena [for them the Anthropocene but equally this could refer to the SDGs] within existing theory in order to contribute to the field (and maintain legitimacy within the academy through publication, promotion, and tenure) and step outside the domains of existing theory to fully capture the magnitude and scope of the [socio-ecological] problem.

Hoffman and Jennings (2015) argue that this results in a:

> relatively narrow research scope… [that shows] little integration and citation of work in other disciplinary areas such as ecology or environmental science. (Linnenluecke & Griffiths, 2013, p. 382).

Indeed, this diagnosis reinforces Hopper's (2019, p. 97) lament that:

> … [a] depressing trend I have encountered is the response by many, often younger academics, that they would love to do such work, but it may not get published in outlets rated highly in research journals that deans insist they should publish in.

Such a trend flies in the face of scholarship that was central to the development of an interpretive and critical approach to accounting research some 45 years ago (noting that there are questions about the current radical intent and relevance of critical accounting scholarship (Unerman, forthcoming)). It might be relevant, therefore, to revisit and reaffirm the insights from the past. In particular, we have selected three papers (Hopwood, 1976, 1983, 1992) to help develop a line of argument that seeks to underpin accounting scholars' keen engagement with wider debates, such as those behind the creation of the SDGs and their operationalization.

Hopwood (1976) identified three features of accounting that necessitated a new approach to understanding this craft. First, he noted that "social, environmental and political developments are focusing increasing attention on the wider accountability of organizations" (Hopwood, 1976, p. 1). To this point he added two more: that accounting is not a technical activity and accounting is not static. In this editorial in the first volume of *Accounting Organizations and Society*, Hopwood (1976, p.2) characterized accounting as:

> … a responsive subject and research into accounting, when seen in this context, is an essential means of ensuring its adaptiveness to developing needs. Indeed, research which can facilitate accounting development is doubly important. Not only can it assist the processes and techniques of accounting to respond more rapidly to emerging economic, social and organizational circumstances, but also the resultant changes in accounting can often help to further the underlying changes.

Central to this argument is the exhortation for scholars to be actively co-developing accounting techniques alongside critiquing aspects of their development.

Once one accepts that accounting has effects beyond the technical, the question arises as to how to study it in the contexts in which it operates, as accounting has constitutive effects as to what is possible for organizations to think and to do (for our purposes, this would include pursuing social and ecological outcomes). Hopwood (1983, p. 303) pointed to the research:

> [needing to ask] questions about how accounting might be related to the more general elaboration of calculative practices in modern society, the ways in which accounts have provided a powerful calculus for forging a new visibility which can facilitate specific modes of control within the business enterprise.

Again, we would argue that in current times this mode has to include consideration of sustainable development concerns. Within Hopwood (1983) is a quote from Platt (1976, p. 42) arguing that:

> … there are strong institutional forces pulling people towards distinct disciplinary approaches; the pressure to disciplinary conformity is probably particular strongly

> felt by younger people who do not yet have a securely established base or identity in a particular field. (Hopwood, 1983, p. 287)

It seems that placing the blame for a lack of curiosity and exploration beyond 'normal' scholarship at either the doors of Deans and/or more recent research evaluation exercises, while containing some truth, might not be a complete explanation for the comparative and surprising lack of engagement with the SDG agenda (see also Bebbington & Dillard, 2007, for an earlier challenge to this line of argument). Being open to and actively shaping a wider conception of what it means to undertake accounting research is clearly a longstanding challenge.

By 1992, understandings of the role and functioning of accounting had expanded further still with:

> [The] functions which are claimed on behalf of accounting … now seemingly of more significance than the calculative practices and procedures which constitute accounting itself. It is as if accounting has been caught up within a complex web of roles, potentials and significances … a proactive means of both knowing and doing, something that is seen as enabling a wider control, governance and indeed adaptability of the organization and the network of institutions within which it is involved (Hopwood, 1992, p. 126).

It is the role of accounting in the "complex nexus of practices, procedures, institutional arrangements, and bodies of knowledge" (Hopwood, 1992, p. 126) that underpin its close connection to environmental limits and social harm (Bebbington & Thomson, 2013). Further, these 'teleconnections' (Bebbington *et al.*, 2020) between organizations and global-level interactions which the SDGs propose to address seem to presently be missing from accounting scholarship. This flies in the face of the founding scholarship on which social, environmental, sustainability and critical accounting work is based and the need for a critically engaged academy (Bebbington *et al.*, 2017).

Contrasting SDG accounting scholarship with SDG accounting practice

In contrast to the slow development (analysed above) of academic research seeking to advance insights into how accounting can contribute to achievement of the 17 SDGs and their underlying 169 targets, many organizations (in both the public and private sector) were quick to build the SDGs into their strategies and external (corporate) reporting. For example, nation states can choose to prepare and submit (to the UN High Level Political Forum for Sustainable Development) Voluntary National Reviews of the progress they have made in achieving the SDGs, with the aim of sharing experience of good practices, encouraging appropriate partnerships and providing an account of performance at a point in time (in 2020, 51 countries have conducted such reviews). A parallel process is available to local authorities (Voluntary Local Reviews: for an entry point to this material see https://sustainabledevelopment.un.org/sdg11/local), providing examples of how the SDGs are articulated by organizations charged with sustaining local infrastructure. While there is less focus on the public sector in SDG accounting related surveys (such as that provided by PwC – see below), it should be noted that local government and other elements of the public sector (such as health services and national parks) are engaged in the SDG agenda and provide valuable sites for future research.

Turing to the private sector, the most recent practitioner survey of global corporate SDG reporting at the time of writing this paper is PwC's *SDG Challenge 2019* report, published in December 2019 (PwC, 2019). This report analysed a range of annual corporate reports published by 1,141 large corporations across 31 countries and 7 sectors. It found that 72% of these corporations disclosed SDG information in one or more of their reports in 2019. Of these, 59% provided SDG disclosures in their sustainability reports while 51% mentioned the SDGs in their annual reports. 34% of disclosing corporations (roughly 25% of the whole sample) covered SDGs in the strategy sections of their reports, indicating that SDGs are becoming central in top-level strategy for many of these corporations. In comparison to the PwC SDG challenge data of a year earlier, the proportion of CEO or Chair's statements including discussion of the SDGs had risen from 13% to 21%, indicating a substantial advance in espoused attention to the SDGs – and reinforcing the view that the SDGs are rapidly gaining traction in the business world by providing "a clear indication that the goals are moving to the top of the executive agenda" (PwC, 2019, p. 6).

However, while 14% of the PwC sample mentioned one or more of the SDG targets, only about 3% disclosed quantitative SDG performance targets for their corporations to achieve, with just 1% of the overall sample quantifying how they had performed in relation to chosen SDG targets. A central role of accounting has long been the provision of quantified information to support strategic and operational decision-making. Therefore, this gap between the number of corporations embracing the SDGs at a strategic level and the number able and/or willing to quantify their performance against SDG targets could indicate specific challenges where accounting research can help develop novel SDG-related solutions.

The paper by Sobkowiak *et al.* (2020) in this special section addresses some of the challenges that need to be overcome for effective quantification to be used in support of SDG accounting. They do this through an in-depth case study of how the UK Government developed metrics to support national-level progress towards biodiversity indicators in SDG 15 (Life on Land). Sobkowiak *et al.* (2020) analyse their case study data through the lens of Callon's widely used theories that explain how calculable spaces are framed (Callon, 1998; Callon & Law, 2005). Specifically, they explore the quantification efforts and challenges at three stages of framing, drawn from Callon's theories, being:

> First, what entities are to be brought within the framed space … Second, how are these entities going to be manipulated and transformed within the space … Third, what kind of result will be extracted; what new entity will be produced? (Sobkowiak *et al.*, 2020, p. 4).

At the first of these stages, Sobkowiak *et al.* (2020) found that data that had been collected for a variety of other purposes was brought into the frame for calculating the UK's performance against SDG biodiversity indicators. There was, therefore, a trade-off between readily available data that had been originally framed for other calculations/purposes and the data ideally suited for calculating performance against the SDG indicators. Issues arose with inconsistency between (1) the measurement framings of the originally collected data and (2) limited possibilities for adaptation of the information infrastructure underpinning the collection of this original data by organizations outside government. Ideally, information infrastructure adaptation would help refocus the data in a way best suited for SDG indicator measurement. In the second stage, compromises were made in combining selected data brought in during the first stage in a way that was considered by the groups controlling this process to provide the most useful policy-relevant compromise information in quantification of performance against SDG 15 biodiversity indicators. In the final stage, the performance indicator measure was reported (extracted) from the data collected after trade-offs in the first stage and compromises made in second stage. This reported data had to cohere with the political decision-making it was intended to support – in this case not directly leading to policy changes around biodiversity, but adding incrementally to the broader evidence base upon which such decisions draw. The overall process of framing biodiversity data in this way was continually refined as the underlying data collection processes and methodologies developed in sophistication and as new (international) policy initiatives demanded different perspectives from the reported data.

While Sobkowiak *et al.* (2020) provide insights in relation to governmental (national level) accounting and accountability for performance towards specific indicators supporting achievement of targets in one SDG, their insights on the framing of SDG-related calculable spaces are likely to be useful in understanding how organizations can develop effective SDG-related calculations. Aspects of the "the socio-technical arrangements that collectively work to frame a space in which these indicators can be produced and reported [and] … can achieve the calculative capabilities necessary to account for and enable pursuit of the sustainable development challenges set out in the SDGs." (Sobkowiak *et al.*, 2020, p. 18) are also likely to be important in understanding how SDG-related accounting metrics develop at organizational-level and across other SDGs.

Another issue highlighted by the PwC (2019) report is the fragmented approach most corporations have taken to incorporating the SDGs into their business strategy. For example, 65% of the PwC (2019) sample disclosed their actions in relation to individual SDGs "suggesting that, at least on some level, they have attempted to identify the goals most relevant to their business and societal value" (p. 19). The most frequently referenced SDGs are SDG 8 (Decent Work and Economic Growth) mentioned by 86% of the sample companies; SDG 13 (Climate Action) mentioned by 80%; and SDG 12 (Responsible Consumption and Production) mentioned by 73%. At the other end of the scale, the least referenced SDGs were: SDG 2 (Zero Hunger) mentioned by just 25% of the sample; SDG 14 (Life Below Water) mentioned by 26%; SDG 1 (No Poverty) mentioned by 30%; SDG 15 (Life on Land) mentioned by 37%; and SDG 10 (Reduced Inequalities) mentioned by 39% of the sample companies. All of the other SDGs were mentioned by between two-fifths and two-thirds of the sample companies. In reflecting on this picture, PwC (2019, p. 6) commented that: "At the moment, some goals that seem very relevant for many sectors – Life Below Water (SDG 14) and Life on Land (SDG 15) – just aren't getting the attention they need".

Two papers in this special section provide novel research insights that can help improve the effectiveness of SDG accounting both in respect of one of the most frequently addressed SDGs in the PwC (2019) survey, SDG 13 (the paper by Charnock & Hoskin, 2020), and areas of sustainability that PwC found to be relatively overlooked in reporting by companies (the paper by Barrett et al., 2020).

Addressing the latter first, the PwC (2019) survey results discussed above indicate that some crucial aspects of the SDG agenda that are of most relevant to human flourishing appear to be regarded as of lesser significance for reporting companies, such as addressing poverty, hunger, and inequalities, along with aspects of environmental sustainability beyond climate change. Embedded in this absence, we would argue, is also a lack of attention to perspectives that emerge from beyond 'usual' business communities or dominant cultures and their beliefs about how the world is and should be. This is the domain addressed by Barrett et al. (2020) who enrich our collective understanding of viewpoints that might underpin a more nuanced and holistic approach to the SDGs. In particular, Barrett et al. (2020) analyse how indigenous communities in Aotearoa-New Zealand had their rights recognized and restored in two recent legal settlements. These two settlements, pursuant to the Treaty of Waitangi, granted legal personalities to what might be seen (to some eyes) as 'natural' phenomena (a tract of land – previous gazetted as a national park – and a river system) and link these settlements to ideas underlying Earth Jurisprudence drawing on Rights of Nature philosophies. In particular, it is noted:

> … market structures treating natural resources as objects for human exploitation [are] a root problem. To rectify this, [Rights of Nature philosophies call] for a new body of law … which privileges maintaining the integrity and functioning of the whole Earth community in the long term over the profit-driven structure of existing legal and economic systems. Such a philosophical perspective prioritizes the fundamental rights of all living things to exist and live in a healthy and sustainable environment (Kauffman & Martin, 2017, p. 132)

As such, the issues covered by Barrett *et al.* (2020) provide insights about how some governance systems are likely to support human flourishing in line with SDGs ambitions (while also noting that the SDGs themselves do not pay due regard to the rights of indigenous peoples). It is also noted that accounting could have a role in providing mechanisms that could help improve the effectiveness of these governance systems, but this requires a move to greater eco-centric thinking in accounting and attention being paid to colonizing effects of scientific discourses and approaches (see Tuhiwai Smith, 2012, for an introduction).

In contrast to Barrett *et al.* (2020)'s highlighting of older and deeper ways of thinking that could point accountants and accounting research towards neglected but crucial elements of the SDGs, Charnock and Hoskin (2020) explore dynamics of climate governance in decisions leading to quantification of indicators in SDG 13 (Climate Change). Using a Foucauldian archaeological-genealogical approach, they analyse over 100 texts used in addressing climate change to explore tensions between ideals motivating the development of SDG 13 and the techniques developed and proposed for implementing SDG 13. They find that both glottographic statements (in essence, statements that use writing to reflect what could also form speech) and non-glottographic statements (in essence, non-speech-like statements, such as graphs and tables) were used in combination to develop and promote specific proposed solutions. In so doing, they "develop an approach for exploring both what accounting says and what it 'makes sayable'" (p. 2). As the PwC (2019) survey shows that SDG 13 is widely addressed by corporations, understanding the governance processes underlying development of the quantification proposed in evaluating performance against the goals of SDG 13 is likely to prove invaluable for academics researching accounting practice and policy development around this widely addressed SDG.

Trends evident from the 2019 PwC SDG Challenge survey are consistent with several other surveys published over the past few years, all indicating growing use of the SDGs in driving business strategy for purposeful businesses (The British Academy, 2019). These trends are also apparent to us as educators in the number of schools and universities we have observed using the SDGs as a framework for advancing their social contributions and educational programmes (see, for example: Kemmy Business School, 2018; Ndubuka & Rey-Marmonier, 2019; Purcell *et al.*, 2019). This, we believe, helps develop students' sustainability literacy which should help them contribute to pro-sustainability strategies as their careers progress into senior executive roles in the private, public and third sectors – resulting in what O'Dwyer and Unerman (Forthcoming) refer to as positive cohort effects in sustainability leadership.

Accounting research should be playing a central role in helping deliver innovative evidence-based solutions to organizational-level strategic and operational SDG-related challenges. From this perspective, it is encouraging that many accounting academics and universities seem to be embracing the SDGs. But it is discouraging that many programmes of research in this area seem to have commenced fairly late in the development of the SDGs – such that few papers had reached publishable standard almost a third of the way through the SDG period of delivery. With this observation in mind, we outline below some directions that SDG-related accounting scholarship could take, especially to avoid the SDGs being simply an 'add on' to more traditional research approaches. In the journey that Hopwood (1976, 1983, 1992) laid out, *how* SDG related phenomena are researched will matter as much as the topic areas that are addressed.

Innovation in accounting scholarship and concluding observations

This paper paper and the special section papers outline some key consideration to motivate accounting scholars to engage with and contribute towards the achievement of the SDGs. What has become apparent in drawing this work together, however, is the relative dearth of scholarship in this area. This final section, therefore, seeks to identify how to remedy this shortcoming by proposing three SDG-related observations from which we might leverage new modes of accounting scholarship.

First – research on the SDGs has to recognize that these goals are interconnected and contain points of conflict as much as they sketch possible transition pathways to sustainable development. The goals came from a process of negotiation and compromise with blind spots (such as that identified by Barrett *et al.*, 2020) and biases. This leads to the realisation that there will be interactions between the goals, with these needing to be identified in order for the goals to be achieved (Nilsson *et al.*, 2016, synthesised these interactions into seven types – see Table 1). Indeed, Bebbington and Unerman (2018) point to the holistic nature of the SDGs, and that while it might be reasonable for each organization to focus on addressing the specific SDGs that are closest to aspects of its business, there can be problems in selective attention to individual SDGs.

Failure to be clear about these relationships and interdependencies between SDGs might be behind PwC's (2019) observation that organizations focus on individual SDGs at the expense of connections between the goals. This absence provides an opportunity for scholarship that explores interactions and the extent to which accounting systems (and reporting) either cannot or does not narrate these complexities. The base from which such work could be attempted exists. In particular, accounting scholarship has focused on climate change, water and biodiversity with a depth of insight being generated in each of these physical domains. A potential next stage in the evolution of this work would be to explore these aspects in concert as constituting the ecological foundations of the SDGs. While it is beyond the scope of an paper (or indeed the views of two colleagues) to specify what this might entail, there could be some potential in understanding organizations whose activities are dependent on these multiple elements and/or whose operations are focused on supporting sound ecological functioning of specific areas/regions. This latter suggestion points to the relevance of researching beyond the corporate domain as organizations with spatial responsibilities are often in the public sector.

Table 1: Typology of influences of SDGs

Indivisible: A goal is inextricably linked to the achievement of another goal.

Reinforcing: A goal aids the achievement of another goal.

Enabling: A goal creates the conditions that further another goal.

Consistent: There is no significant positive or negative interactions between goals.

Constraining: Achieving one goal limits the options on another goal.

Counteracting: The achievement of one goal clashes with another goal.

Cancelling: Success in one goal makes it impossible to reach another goal.

Source: based on Nilsson *et al.* (2016, p. 321), p. 321.

Second – the SDGs that focus on the core dynamics linking social and environmental factors may provide greater promise for organizational disciplines. Waage *et al.* (2015), in focusing on SDG interactions, identified that some goals provide cross-cutting connections between the natural environment and human wellbeing. These include SDG 8 ("promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"); SDG 9 ("build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"); and SDG 12 ("ensure sustainable consumption and production patterns"). These are SDGs that are intimately connected with and driven by organizational operations and also ones that set up a series of conflicts or tensions (reflecting the dynamics of global production systems: see Nyström *et al.*, 2019). As previously indicated, organizations who operate infrastructure might be particularly valuable sites in which to research these cross cutting goals.

Likewise, this suggests that some organizations will be more significant than others in the collective pursuit of the SDGs. Some indications of which sectors and how many companies are critical to SDG outcomes exist. For example, the World Benchmarking Alliance (which develops benchmarks of performance to support sustainability transitions in the private sector) has identified the 2,000 companies globally that have the most influence over our ability to achieve the SDGs (and which collectively make up half of the global economy). Their 'SDG2000' benchmark seeks to provide data on the performance of these firms and provides a glimpse into a novel cohort of companies who could form the basis of a research dataset (see also Bebbington *et al.*, 2020, who expand on such an approach). The key here is that a selection of a group of companies that are relevant to the achievement of the SDGs is not predicated on common accounting/finance modes of scholarship (for example, stock market listing location or company head-quarters) but might be determined by how organizations affect a key element of the natural environment.

Third – the SDGs (along with the Paris agreement) signalled a distinctive change in approach to governance that is a:

> compromise between the scientifically necessary and politically possible … [with the SDGs being] a radical departure for international policy with no precedents and are beginning to shape national policy, civil society and business decisions. (Kanie *et al.*, 2019, p. 1745)

This approach (in contrast to governance processes where states formalize commitments and these eventually translate into new operating conditions for organizations) is one where organizations individually and in concert will have a significant impact on outcomes. This means that accounting scholars need to know who the 'players' are in this new governance landscape and contribute understanding to those bodies (a point made by O'Dwyer & Unerman, Forthcoming).

Approaches that bring together stakeholders (such as: business, academia, civil society, state governments and United Nations' bodies) around SDG challenges include the UN Global Compact, 'Action Platforms' (see https://www.unglobalcompact.org/sdgs/action-platforms). Such platforms are an innovation built off extensive experience of the Global Compact and are designed to resolve complex sustainability challenges and to innovate around the SDGs. Activities of these action-platforms provide valuable source material for accounting related scholarship.

Finally, it is also likely that new concepts will emerge that describe what it means to be 'responsible' if top down governance does not specify what are appropriate organizational actions and if broader coalitions are formed to progress the SDGs: how organizations might become 'stewards of the biosphere' is an open question in such a setting (Folke *et al.*, 2019).

Taken together, the evidence provided in this paper suggests that the work started by Hopwood (1976, p. 3) on the "integration of accounting and social perspectives" is ongoing. Accounting scholarship has to evolve beyond a focus on the 'sociology of preparers' (Bebbington & Larrinaga, 2014) and away from studying reports (which have been comprehensively shown to be decoupled from organizational reality). 2020 (so far!) has been a year of significant challenge, with (among other things) Australian wildfires; East African floods; a rapidly warming Artic as well as the global COVID-19 pandemic and an uncertain economic trajectory (including a temporarily negative oil price). These challenges follow, and may well further accelerate, the remarkable advance we saw in 2019 of societal interest in, and commitments to, ecological sustainability and social justice. Such an acceleration is likely to pose potentially significant risks to organizations that fail to adapt their strategic models accordingly, and can thereby provide a strong motivation for even more organizations to use the SDGs as a framework to help embed understandings of sustainably in their risk management and strategic directions.

If accounting scholars are to navigate and contribute towards the positive development of this world in a meaningful sense, then a serious investment in socio-ecological literacy is required. More academics will also need to actively engage with contemporary and sometimes rapidly evolving issues in the worlds of sustainability policy and practice, so they become aware at an early stage of key sustainable development matters upon which their research can have a strong and positive impact. This might sometimes entail a wholesale redesign of research approaches and short-term career incentives, with academics actively horizon scanning to help us deliver highly impactful forward-looking research to the benefit of society today and in future generations. The SDGs provide a key framework for this transformation that can help as societies transition to a post-COVID-19 world. We look forward to seeing a rapid development in such impactful and high-quality SDG accounting research.

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