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The OECD and the expansion of PISA: new global modes of governance in education

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This paper examines the expansion of the OECD's Programme for International Student Assessment (PISA) and associated growth in the influence of the OECD's education work. PISA has become one of the OECD's most successful 'products' and has both strengthened the role of the Directorate for Education within the organization and enhanced the significance of the organization in education globally. We provide an overview of the OECD, including organizational changes in response to globalization and the changing place of the Directorate for Education within the organization, particularly with the development of PISA in the late 1990s. We show how the OECD is expanding PISA by broadening the *scope* of what is measured; increasing the *scale* of the assessment to cover more countries, systems and schools; and enhancing its *explanatory power* to provide policy-makers with better information. The OECD has also developed the Programme for International Assessment of Adult Competencies (PIAAC) and PISA-based Tests for Schools, which draw on the PISA template to extend the influence of its education work to new sites. The paper draws on data from 33 interviews with past and present personnel from the OECD, the International Association for the Evaluation of Educational Achievement (IEA) and the English and Australian education systems, as well as analysis of relevant OECD documents. We argue that PISA, and the OECD's education work more broadly, has facilitated new *epistemological* and *infrastructural* modes of global governance for the OECD in education.

Introduction

In this paper we examine the increasing global significance of the Organisation for Economic Co-operation and Development (OECD) in education, focusing particularly on the expansion of the Programme for International Student Assessment (PISA) and associated developments in the OECD's skills assessment work. The end of the Cold War and concomitant rise of globalization have led to growing pressure for international comparative performance data on schooling systems and, along with other national education policy developments, this has contributed to growing demand for the technical expertise of the OECD. Since it was first conducted in 2000, PISA has become hugely successful and has received considerable media coverage and attention from politicians and policy-makers in many nations. The recent publication of the OECD's cross-committee skills strategy (OECD, 2012) also provides a meta-framing for the increasingly organization-wide nature of its education work and reflects the enhanced internal significance of the Directorate for Education and PISA.

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Our specific focus in this paper is the contribution of PISA to enhancing the influence of the OECD in global governance in education (Jakobi & Martens, 2010; Meyer & Benavot, 2013). Additionally, we argue that the success of PISA has provided a prototype for the OECD to expand its global testing approaches to the domain of adult skills through the PIAAC, to school-level performance through the new PISA-based Tests for Schools programme, and potentially to higher education through the Assessment of Higher Education Learning Outcomes (AHELO) (Shahjahan, 2013). These programmes look likely to strengthen further the OECD's global influence in education policy-making and its contribution to 'globalizing empiricism' (Torrance, 2006) in education through establishing 'centres of calculation' (Latour, 1987) that influence national policy debate. Indeed, with PISA and its annual reporting of educational indicators in *Education at a Glance*, the OECD has become the recognized global provider of technical expertise in the measurement of schooling performance by governments in both member and non-member nations. However, the technical aspects of the tests and the nature of the influence that the OECD has had in education through the success of PISA, particularly the national league tables it is used to produce, have been criticized and contested (see Hopmann *et al.*, 2007).

Data collection and analysis have been important dimensions of the OECD's work since its inception in 1961 (Jakobi & Martens, 2010; Carrol & Kellow, 2011), but globalization has increased the demand for and influence of this work (Henry *et al.*, 2001). During the 1990s, the US and other members pressed the OECD to develop educational tests and databases as surrogate measures of the potential global competitiveness of national economies. As Brown *et al.* (1997, p. 8) observe, 'the competitive advantage of nations is frequently redefined in terms of the quality of national education and training systems judged according to international standards'. By providing the global infrastructure that enables this commensuration and comparison, in conjunction with the assessment programmes conducted by the International Association for the Evaluation of Educational Achievement (IEA), and supported by the network of epistemic policy communities that the OECD sustains (Kallo, 2009), PISA contributes to 'harmonizing the globe' (Trohler, 2010) and is helping to establish a global education policy field (Lingard & Rawolle, 2011).

With Eccleston (2011, p. 248), we recognize that the authority of an international organization such as the OECD has both 'rational–legal and moral dimensions' and agree with the observation that an 'international organization's political authority is at its zenith when its rational/technical agenda aligns with prevailing social values and sentiments'. In this respect, the enhanced significance of PISA can be explained in terms of new demands for international comparative measures of educational performance in an age of accountability and audit culture (Power, 1997; Hopmann, 2008) and evidence-informed policy-making (Head, 2008; Wiseman, 2010). Understanding 'policy as numbers' (Lingard, 2011) is a prevailing sentiment in contemporary education policy-making, and these numbers now enable comparison as a new mode of governance across national and global scales (Novoa & Yariv-Mashal, 2003; Simola *et al.*, 2011).

Since the 1990s, the enhanced significance of data in the OECD's education policy work has had effects on its modes of governance. As Ozga (2009, p. 150) observes, 'data production and management' today 'are essential to the new governance turn'.

Jakobi and Martens (2010, p. 169) argue that demand for the Organization's technical expertise has enabled it to enlarge its 'toolbox of governance mechanisms'. The OECD now produces what we see as globalized education policy discourses (Lingard & Rawolle, 2011), through peer reviews of policy, data generation and analysis, and its impact on the framing and stages of policy-making and enactment within nations. Woodward (2009, p. 99) observes that the Organization has probably become the 'premier supplier of educational statistics and sculptor of education policy agendas worldwide', ahead of other relevant international organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO). 'Sculptor' is a significant term here because it signals the OECD's exercise of soft power, particularly through its unique mechanisms of peer pressure and review. However, we note the heavily mediated effects of the OECD's work through national politics and policy-making.

Woodward (2009) provides a useful typology of four OECD global governance modalities. The first mode is *cognitive* governance, which occurs through the Organization's 'embodiment of the values the members hold sacrosanct and which stitch them together as a community' (p. 6). The second, *normative* governance, describes the Organization's capacity for 'challenging and changing the mindsets of the people involved' (p. 8) in its work, both in Paris and within nations. Cognitive and normative governance are clearly related, with the aligned positions of members and partners increasing receptivity to the views promulgated by the Organization, in turn potentially creating further alignment. Kallo (2009) has drawn attention to this creation of epistemic policy communities through the organizational structure and functioning of the OECD and, following Carroll and Kellow (2011), we see the OECD's most 'substantial influence being epistemic in nature' (p. 264): a form of epistemological governance. Legal governance is the least prominent mode, with relatively few binding agreements created by the OECD, and this is particularly the case in education. *Palliative* governance describes the 'bundle of ways in which the OECD greases the wheels of global governance by providing a sanctuary for issues that do not sit easily elsewhere' (p. 8). This includes the support it provides for the World Trade Organisation (WTO) and the Group of 8 (GO8) and Group of 20 (G20) finance ministers, drawing on its technical expertise and databases. Indeed, we argue that the OECD's capacities for data collection and analysis are an important dimension of its palliative governance function, enhancing its contributions to the work of governments and other organizations. Our analysis here will augment Woodward's account, characterizing cognitive and normative governance as part of a broader epistemological governance function and arguing that the creation of global infrastructures for data collection and comparison constitutes a specific form of palliative governance.

Our analysis draws on data from 33 semi-structured interviews conducted in 2011 and 2012 with (a) past and present OECD personnel; (b) personnel in other international organizations such as the IEA; and (c) personnel in English and Australian education systems, statutory authorities, and education research organizations. These interviews were conducted during 2011 and 2012. To preserve the anonymity of participants we refer to them in the most generic terms and do not identify their organization or position. We also draw on document analyses of OECD reports and papers

relating to PISA, PIAAC, PISA-based Tests for Schools and the education and skills assessment work of the OECD more broadly.

In analysing our interview data, we recognize that the OECD is not a homogeneous entity and that amongst OECD staff and other interviewees there are sometimes contested views about the developments we are dealing with in this paper. We thus do not take the views of interviewees as necessarily those of the Organization and recognize the partiality of each account. However, the number of interviews conducted across different areas of the Organization and externally, in this study and previously (Henry *et al.*, 2001), set against official OECD accounts in policy documents, in our view strengthens the veracity of our analysis. We treat interview data as insider accounts of contemporary developments within the Organization, while at the same time acknowledging the interplay between the discourses that position OECD work, the effects of its organizational structures and the potentiality for agency of OECD staff (Ball, 1994, p. 118).

The changing education work of the OECD

In 1961 the Organisation for European Economic Cooperation was reorganized to create the OECD with the aim of promoting policies that encouraged the growth of member economies and the development of trade and the world economy. The OEEC and OECD were both important elements of the Bretton Woods agreement that established the post war global infrastructure of international economic relations. However, the OECD differs in important ways from other institutions that developed out of that agreement, such as the International Monetary Fund (IMF), the WTO and the World Bank, due to its intergovernmental structure, its concentration of technical expertise, and its unique positioning 'as an important node in a transgovernmental network where policy experts can meet, interact and devise coordinated responses to common policy challenges' (Eccleston, 2011, p. 246). As Carroll and Kellow (2011, p. 5) emphasize, the OECD is effectively owned by members who 'cannot easily criticize the data or analyses'. This increases its capacity to exert soft power through peer pressure or what Woodward (2009) describes as normative governance. Following the collapse of the Soviet bloc, and with the emergence of a global economy, many more nations now meet its membership criteria of commitment to a market economy, pluralist democracy and human rights.

In redefining its policy remit following the end of the Cold War (Woodward, 2009; Carroll & Kellow, 2011), the OECD reconstituted itself as a centre of policy expertise and comparative international data, based on its programmes of measurement, comparison and analysis (Jakobi & Martens, 2010). It has also actively enhanced its global reach through the accession of new member nations and enhanced engagement with non-members. The Organization increasingly has policy influence with non-members, working around development issues, with 'economies in transition' and with the BRIC nations (Brazil, Russia, lndia, China).[1] While some scholars have argued that the OECD's smallish and homogeneous membership has allowed it to retain coherence and has enhanced its effectiveness (Woodward, 2009; Mahon & McBride, 2008), sustaining its relevance in the so-called Asian-century, and with the rise of major non-member economies, is clearly a new challenge.

Henry and colleagues (2001, p. 7) argue that, in respect of education, the OECD has become more of a policy actor in its own right during the post-Cold War era. Its technical expertise has contributed to the emergence of a global education policy field (Lingard & Rawolle, 2011) through what Lawn and Lingard (2002) call a 'magistrature of influence' above the nation. This influence is epistemic and works through 'a new class of deterritorialized trans-national policy actors… a policy elite which act across borders, display a similar habitus, have the feel of the same policy game' (Henry *et al.*, 2001, p. 292). The intergovernmental structure of the OECD helps to establish this network of policy actors across national capitals.

The place of education work within the OECD has changed dramatically since its establishment. Initially education had an 'inferred role' in the OECD's work and no independent structural location (Papadopoulos, 1994). In 1975 it was incorporated into the remit of the Directorate for Social Affairs, Manpower and Education, which in 1991 was reconstituted as the Directorate for Education, Employment, Labour and Social Affairs (DEELSA). However, the ascendency of Education began in earnest during the mid 1990s through a combination of developments, including: the ratification of new policy positions on education (e.g., lifelong learning and knowledge-based economies) (OECD, 1996a, b; Jakobi & Martens, 2010); the creation of the Indicators of Education Systems (INES) programme and the publication of *Education at a Glance* (Henry *et al.*, 2001; Jakobi & Martens, 2010); and the alignment of statistical data categories and data sets held by the OECD, UNESCO and Eurostat (Grek *et al.*, 2009). At this time, member countries, particularly the US under President Reagan and in the long aftermath of the *Nation at Risk* report, were demanding regular and reliable data on the comparative performance of their education systems and the OECD's education work evolved in response.

PISA also emerged in the mid 1990s and an assessment has taken place triennially since the initial round in 2000. An interviewee described the significant effect that the programme had on the recognition accorded to education work within the organization:

> Sometime in 2002 we discovered that if you Googled PISA the first site that came back was the OECD site and the second was the leaning tower. That remains the case actually… That created a little flurry of emails. Others were saying, I just Googled for, and they would name what they thought was a high profile piece of work their directorate did, and it either didn't appear or didn't appear high. Within 24 hours the emails had become: Does anyone know the Google algorithm? So PISA really raised the status, it changed the debate about education internationally but gosh it changed the status of education within the OECD.

In 2002, during this moment of ascendency, Education became an autonomous directorate and, with the increasing influence of PISA, began to assume an enhanced role within the OECD and beyond. Indeed, Rinne and colleagues (2004) described the OECD at this time as a new 'eminence grise' in education globally.

The rise of the OECD's education work is linked to the 'economization' of education policy and what we might see as the simultaneous 'educationizing' of economic policy, linked to the growing significance of skills and human capital agendas across the Organization. The influence of human capital theory on the broad economic policy positions adopted and promoted by the OECD has led to education becoming a

central area of concern. Indeed, the OECD (2012, p. 10) proclaims that 'skills have become the global currency of twenty-first century economies'. This position draws theories of human capital, lifelong learning and knowledge-based economies into an overarching policy narrative that presents education and training as a primary site of policy intervention to improve, simultaneously, both the well-being of individuals and the economic strength of nations. There are forceful critiques of this narrative, which argue that the promise of more earning through more learning cannot be kept, given the complex empirical reality of contemporary global trends in education provision, labour markets and modes of production (Brown *et al.*, 2011). While there is recognition of these trends within the Organisation (e.g., Schleicher, 2010a), the narrative in which skills are presented as the solution to a range of economic and social problems remains dominant. Indeed, the skills agenda is now at the very heart of the Organization's economic work and is linked to its role in neo-liberal globalization. Rizvi and Lingard (2010, p. 131) have argued that the OECD actually 'ontologizes' the processes of neo-liberal globalization it describes and uses as rationales for programmes and policy development. In Bourdieu's (2003) terms the OECD uses a 'performative' semiotic construction of the concept of globalization, implying only a neo-liberal reading, and denying other accounts in the process. We can see at work here what Rizvi and Lingard (2010) call a 'normative' as opposed to an 'empirical' account of the phenomenon.

The emergence of education and skills as a significant area of work across the OECD was described in a number of our research interviews. For example, one interviewee observed that the new cross-committee skills strategy is an attempt to 'bring together and leverage different [skills] initiatives and pool together some common lessons coming out of all of these'. Another interviewee described how this cross-directorate focus has increased the influence of the Directorate for Education: 'the area that unites the main OECD agenda is skills: skills in employment, skills in productivity, skills in social outcomes, skills in health outcomes… Education is sort of instrumental to deliver skills'. This was also recognized by an interviewee in the Economics Department, who described how Education now provides 'one of the best examples where [inter-directorate] communication is very good'. Here we can see how the OECD's skills strategy represents an important node of convergence around education across the Organization's different domains of policy expertise, a situation that was acknowledge by an interviewee within Education:

> For these past four or five years [the Directorate for Education] have increasingly been working with the Economics Directorate, also with Employment, with Science and Technology… So it is now one big OECD family and we have conquered a major pillar in it.

We note here the tendency of interviewees to emphasize the significance of the directorate within which they are located. However, we can see here that interviewees from across various directorates were in agreement about the increased influence of Education in the Organization's overall agendas.

The OECD's skills strategy draws on the Organization's expanding measurement of skills through programmes such as PISA and now PIAAC, coupled with the increasing policy impact of PISA within nations (Breakspear, 2012). For example, one interviewee observed that 'what happened to elevate the status of PISA was partly

Germany's reaction'. As Ertl (2006) has shown, Germany's poor performance in in the first round of PISA sparked a sense of national crisis and spurred public debates about education. This propensity for PISA to promote national re-evaluations of the performance of education systems and its use to legitimize the need for reform has been a prominent element of its relatively short history and one actively embraced by the OECD (Takayama, 2008; Grek, 2009; Sellar & Lingard, 2013). Of course, in each instance the relationship between measures of national performance on PISA, media coverage of this performance, political rhetoric and substantive effects on policy within nations requires careful analysis.

PISA is having an increasing impact on the work of other directorates within the Organization. One interviewee explained that now 'more and more parts of the OECD are looking to use PISA data, or are trying to get PISA to develop indicators that are interesting for them'. PISA data are used in the flagship economic surveys produced by the Economics Department, which have been central to the work of the OECD since its inception in 1961, and now in the *Going for Growth* reports that contribute to the work of the G20. Indeed, one interviewee explained that PISA is now used 'in all of [the] reviews' undertaken by the Economics Department, while another observed that it has become an 'incredibly important piece of the puzzle'. The Directorate for Financial and Enterprise Affairs successfully lobbied to have financial literacy assessed as part of the 2012 PISA survey and this will result in further cross-directorate usage of PISA data.

While PISA is currently being championed within the OECD, this has been made possible, at least in part, by demands from member countries. Countries opt into PISA and pay to participate, rather than the OECD holding expectations that members participate. The increased subscription among members and non-members is indicative of the Programme's enhanced global significance today and the increasing use of international comparative performance data to guide policy development and enactment within nations. It is important to note, however, that there is also gentle encouragement from the OECD for countries to participate in PISA and to pursue reform agendas ostensibly supported by PISA findings. One interviewee explained that '[participation in PISA is] an offer and I think there is clearly, in many countries, the sense that we need to see ourselves in a global picture. So I expect take up to increase further but it sometimes has to be pushed'. There is a self-perpetuating dynamic here, whereby demand for and participation in PISA strengthens its influence and drives further expansion and promotion of the Programme. However, the usage of PISA performance data by nations often serves ends defined in the context of national politics; that is, performance is often used to legitimize the reform agendas of national governments though a form of 'externalization' (Schriewer, 1990; Takayama, 2008; Sellar & Lingard, 2013).

While it is clearly too early to make any definitive assessments of the effect that the present global economic context is having on the work of the OECD, the global financial crisis and shifts in geo-political economic power, particularly toward Asia (e.g., Jacques, 2009), are creating new demands for PISA. One interviewee explained that:

> There are countries now [including Greece and Spain], perhaps increasingly with the financial crisis… coming to see us, saying 'We have to make better use of the resources we've got, what are the policies that, from your international experience, do you think should be brought to bear in our country?'

As we will discuss below, the OECD has also been negotiating carefully with China and India to garner their participation in the Programme, and within China the international benchmarking provided by PISA is seen as a tool for driving education reforms (Tan, 2012). In this context of economic crises and shifts in the balance of economic power globally, the OECD is seeking to expand the scope, scale and explanatory power of PISA. This expansion is the focus of the subsequent sections of the paper.

Expanding PISA and the OECD's related skills assessment work

PISA has been a successful programme for the OECD and has expanded significantly since its introduction. This expansion includes (a) widening the *scope* of the assessment to measure a broader set of skills and competencies; (b) increasing the *scale* of the assessment to cover more countries, systems and schools; and (c) enhancing the *explanatory power* of the assessment for policy-makers and educators. These areas of expansion have been identified through our analysis of research interviews and other publicly available documents describing the changing nature of the programme. For example, they are illustrated in Andreas Schleicher's (2010b) comments on the future of PISA and the OECD's assessment work in education:

> The long-term future lies with multi-layered assessment systems that extend from classrooms to schools to regional to national to international levels [*scale*], that measure not just what students know but also how students progress, that are largely performance-based, that make student's thinking visible, and that allow for divergent thinking [*scope*]. Also, these assessments must generate data that teachers, administrators, and policy-makers can act upon [*explanatory power*]. (Schleicher, 2010b, p. 434)

In the following sections we examine new developments in each of these areas of expansion, including the introduction of new programmes, such as PIAAC and the PISA-based Test for Schools, which extend from and augment the work of PISA.

Scope: measuring 'wider' conceptions of human capital

PISA was characterized by one of our interviewees as providing a measure of the flow of human capital from schooling systems. The concept of human capital has evolved since it was popularized in the middle of last century, particularly in response to related changes in the global economy and new forms of governance in advanced capitalist nations. Feher (2009) argues that the concept is now considered to incorporate a wide set of qualities beyond the academic skills and competencies gained through education and training. Indeed, any capacity or characteristic that can be measured and correlated with improved future economic outcomes can be considered part of one's human capital, which the OECD defines as 'the knowledge skills, competencies

and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being' (OECD, 2001, p. 18).

Investments in human capital are no longer made only during an initial period of education and training in anticipation of future returns. As Feher (2009) has argued, changes associated with the financialization of economic capital can also be understood to apply to human capital:

> In the neoliberal world of globalized and unregulated financial markets, corporate governance is concerned less with optimizing returns on investment over time than with maximizing the distribution of dividends in the short run. Accordingly, its major preoccupation is with capital growth or appreciation rather than income, stock value rather than commercial profit… If we apply this major strategic shift in governance to human capital, it appears that an investor in his or her human capital is concerned less with maximizing the returns on his or her investments—whether monetary or psychic—than with appreciating, that is, increasing the stock value of, the capital to which he or she is identified. (Feher, 2009, p. 27)

As both Deleuze (1995) and Rose (1999) have argued, education is no longer limited to specific institutional sites, but is now a matter of diffuse and perpetual learning to sustain and increase the value of one's human capital. This shift registered in the OECD's education work during the 1990s with the valorization of lifelong learning (OECD, 1996b; Jakobi & Martens, 2010), and the current expansion of its human capital assessment programmes can be seen as an effort to keep pace with the proliferation of sites in which human capital now changes in value, as life 'become[s] a continuous economic capitalization of the self' (Rose, 1999, pp. 160–161).

There is a view within the OECD that measuring flows of human capital from schooling does not provide a sufficient picture of the human capital stocks of nation, as one of our interviewees explained:

> PISA is a measurement of the flow of human capital into the economy. What matters for innovation is not the first stock of human capital, it's the ability of the work force to come up with new products and new processes; but also to adopt new processes… PISA is just a flow, so the flow, it actually contributes to the stock. But it will take a long time, so we're interested to have a measurement of the stock.

Drawing on earlier adult literacy and skills surveys, PIAAC has been introduced to augment PISA by providing an assessment of human capital stocks among adult populations (16- to 64-year-olds), and AHELO could potentially provide another complementary measure of human capital at the end of tertiary education. However, a more fundamental challenge to the measurement of human capital is also raised here: How to capture the ongoing relationship between changing economic and technological contexts and associated changes in the value of human capital?

The OECD has identified a need to improve its measurement of traits associated with innovation and entrepreneurship (OECD, 2010): that is, the capacity to develop and profit from new products and processes. The challenge here is to quantify traits that *might* have value for future innovations. These traits are inherently less tangible than the established knowledge and skills required for existing production processes. One interviewee explained that the OECD is interested in understanding the relation-

ships between general traits associated with high performance on particular areas of PISA and future success: 'determination, lateral thinking, creative thinking, those kinds of things. This is what you need to have in order to get this [PISA] item [correct], that we can see is predictive of future success' (see OECD, 2013).

This analytical focus on behavioural traits draws on a body of work examining non-cognitive skills or personality traits (Jencks, 1979; Bowles *et al.*, 2001) as a dimension of what the OECD has defined as 'wider' human capital (OECD, 2002). These traits can be considered to represent more enduring *potential* for human capital appreciation, in contrast to specific technical or academic skills that are susceptible to obsolescence with technological and economic change. However, the value of particular personality traits is strongly context dependent and efforts to identify and quantify these 'irreducibly heterogeneous' traits can complicate the measurement of human capital (Bowles *et al.*, 2001, p. 158; see also Stasz, 2001). As Feher observes, human capital appreciation is 'especially difficult to predict, both because the future marketability of a conduct or a sentiment cannot easily be anticipated and because the correlation between financial and psychological forms of self-appreciation cannot be homogeneously established' (p. 28).

The expanding scope of PISA is a response to these widening conceptions of human capital and constitutes an expansion of the dimensions of human beings that are subject to commensuration. An important function of the OECD is what Espland (2000, p. 73) calls 'commensurative work', which involves using numbers to compare disparate things and requires 'elaborate coordination, discipline, technical expertise, the capacity to invest in long-term projects, and money'. We argue that the OECD is undertaking such commensurative work in relation to a widening set of human attributes. An interviewee explained:

> We need to embrace a broader range of competencies… you need to build in interpersonal competencies, problem solving; intrapersonal competencies and motivation, self-concept and so on, and these are things we just need to do better and need to work hard on to broaden the horizon.

In conjunction with efforts to identify traits evident in PISA performance and associated with future success, this evolution in OECD human capital metrics is most clearly illustrated by the introduction of personality trait measures in PIAAC.

In 2012 PIAAC assessed, for the first time, the skills of 16- to 64-year-olds in 23 nations, with findings to be published in October 2013. Like PISA, PIAAC is assessing literacy, numeracy and problem-solving skills, but will be conducted as a largely computer-based survey wherever individuals have the necessary technological competencies. The PIAAC background questionnaire also assesses personal traits such as 'grit' (persistence and self-discipline), locus of control, political efficacy and social trust (OECD, nd). An interviewee explained that this aspect of PIAAC could increase its impact relative to PISA:

> We know how to measure income, employment, but we have no sense of things like self-concept in society, participation, political efficacy… I think PIAAC will put those things on the map. Quantify it. Show that there are real differences among countries on this, that the potential for influencing the running of societies I think is really, really good.

This statement indicates the importance attached by some within the OECD to expanding the scope of its education metrics as a means to enhance the Organisation's global governance function in education. As conceptions of human capital evolve and its value fluctuates in relation to changing contexts, the OECD's education metrics now seek to quantify not only *what* people know or can do, but *who* people are and who they can become.

Scale: measuring human capital in more places and more often

Participation in PISA has increased significantly since the first assessment in 2000. This reflects a spatiotemporal expansion that is widening the pool of human capital assessed by the OECD through incorporating more countries and new sub-national sites of assessment (e.g., municipalities and schools).[2] PISA-based Tests for Schools have been trialled and are now being made available to schools to enable benchmarking against other schools nationally and globally. These tests represent a significant shift in the scale and frequency of PISA-related assessments. The impetus for this spatiotemporal expansion was described by an interviewee who explained that the OECD aims to have 'the broadest possible picture of the global talent pool' and to provide PISA as 'an open metric that people can subscribe to as they wish'. As a result, the OECD's education work is becoming multi-scalar, more flexible and covering more of the global population, particularly as China and India begin to participate. One interviewee observed that international testing programmes such as PISA and the IEA's Trends in Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) now almost seem as if 'they always existed, but it's an evolutionary thing that we're heading into places that we haven't been before. An extension of the innate model to an international one to developing countries brings a whole range of challenges'.

Twenty-eight OECD members and four non-member countries participated in PISA in 2000. In 2012 all 34 OECD countries, plus an additional 30 non-member countries and economies participated; more than double the original number of participants and a considerable expansion of non-member participants. Notably, all of the countries being targeted through the OECD's Enhanced Engagement programme (Brazil, China, India, Indonesia), except for South Africa, now have some degree of participation. Shanghai–China participated for the first time in 2009 and two provinces in India (Tamil Nadu and Himachel Pradesh) participated in PISA+ 2009, which assessed ten economies that were unable to meet the timelines for participation in the standard PISA assessment. These included Malaysia, Venezuela (Miranda) and the United Arab Emirates. The reach of PISA now extends into new regions of Asia, South America, North Africa and the Arab Gulf, and importantly includes each of the BRIC nations.

The effects of the global expansion of PISA were well illustrated in the wake of Shanghai–China's outstanding performance in 2009. Finland's top PISA performance since the beginning of the programme has made it a global education 'poster boy' (Sahlberg, 2011). However, Shanghai's top performance in its first assessment, along with the strong performance of other East Asian nations such as Singapore, is now encouraging the US, UK and Australia to 'look East' when justifying the need

for domestic educational reform (Sellar & Lingard, 2013). The recently published edited collection, *Surpassing Shanghai: An agenda for American education built on the world's leading systems* (Tucker, 2011), signifies this shift of perspective in global policy learning and the benchmarking of education systems. As Luke (2011) and some within the OECD (Schleicher, 2010a) have noted, the US is now looking outwards for education reform ideas, partly due to a new 'Sputnik moment' created by the surprisingly strong PISA performance of Shanghai in the context of shifting geopolitics and economic power. The influence of PISA as a tool for comparison increases as the number of participating countries and economies expands, and the participation of new economic powers such as China and India has made possible new comparisons that have drawn the attention of politicians in the US and the UK, where PISA has not had significant effects on policy debate previously.

One of our interviewees emphasized that 'one of the biggest things PISA has sparked is the [multilateral] interest of countries in other countries'. For example, in Australia the Grattan Institute recently published a report titled *Catching up: Learning from the best school systems in East Asia* (Jensen *et al*., 2012). Australian Prime Minister Gillard observed that 'four of the top five performing school systems in the world are in our region and they are getting better and better' and Australians cannot afford to become 'workers in an economy where we are kind of the runt of the litter in our region and we've slipped behind the standards and the high-skill, high wage jobs are elsewhere in our region' (*The Australian*, 24 January 2012). Here we can see how the expansion of PISA increases the potential for multilateral comparisons and, with the strong performance of Asian economies, is shifting the global comparative gaze away from North America and Europe for some nations.

The development and trialing of PISA-based Tests for Schools in the US, UK and Canada represents a further expansion through rescaling the assessment. As one interviewee explained, 'the idea for this [programme] was generated because more and more countries, in between PISA cycles, were coming to the OECD and saying "We'd really like to use the tests in this area or with this group of schools"'. A 2012 pilot programme provided school level analysis using PISA-based items and was designed to enable schools to compare their performance against other schools globally. The trial was oversubscribed in the US and generated strong political interest in the UK. The test itself will likely be freely available to schools and able to be implemented on demand, which is a significant departure from the triennial synchronous assessments of nations and systems. However, schools will likely need to contract an approved provider of assessment and analysis services for their results to receive official recognition. This raises the possibility of edu-businesses such as Pearson, who are increasingly becoming involved in the education work of the OECD, finding a profitable niche in the delivery of this programme (see Ball, 2012). Like PIAAC, PISA-based Tests for Schools provide a clear example of how PISA is being expanded through the adaptation and extension of its successful model.

Explanatory power: providing more influential evidence for policy-makers

Expansion of the scope and scale of PISA is being complemented by efforts to increase the explanatory power of the Programme's findings. The policy impact of

PISA has been significant in some countries, and is increasingly having effects on national policy debate in others. One interviewee explained that, in this context, the OECD is seeking to increase further the potential for PISA to be taken up as evidence in policy-making:

> The normative impact is really encouraging, the extent to which PISA is making a policy difference at country level, but we don't rest on that at all. We think that PISA could become even more policy relevant, and the analytical or explanatory power of PISA could be enhanced. So, we're looking all the time to sort of think into the future: 'What is it that would sort of make PISA an even more valuable tool for policy-makers?'

Martens and Jakobi (2010, p. 7) argue that the soft power exerted by the OECD relies on the Organization's idea production, policy evaluation and data generation: 'the OECD today not only defines the problem, but also offers the solution, in contrast to its practice in the 1970s' and 'the organisation has therefore gained an important status in several stages of national policy-making, ranging from agenda setting to policy formulation and implementation' (Jakobi & Martens, 2010, p. 175). We see efforts to increase the explanatory power of PISA as strengthening the OECD's idea production function in education, through the normative framing of policy problems and solutions and the promotion of policy ideas, by leveraging the Organization's policy evaluation and data generation functions. The analytical expansion of PISA involves using data in new ways to make claims about relationships between policy settings and educational outcomes, increasing the potential influence of PISA findings in national policy-making.

Two examples of this expansion are the current efforts to enhance the background data collected during PISA assessments and to link PISA data with data from other programmes, such as the Teaching and Learning International Survey (TALIS). Much of the analytical power of PISA data derives from the identification of relationships between testing outcomes and background data about students and schools. A number of questionnaires are administered with PISA, including a standard student background questionnaire, which is used to gather data on socioeconomic status and student attitude, a school principal questionnaire, and other optional questionnaires. One interviewee explained that 'we have to try and improve the measures in the background, otherwise we're not going to succeed in explaining what makes a difference to performance'. In other words, linking performance data to other data sets is seen as a means to increase the explanatory power of the assessment.

A related issue, as noted by this same interviewee, is the absence of a teaching questionnaire and the gap this creates in providing explanations for different outcomes: 'the bit that is missing must have a lot to do with the teaching and teachers… So, we're looking over time to see how TALIS and PISA could be complementing each other more than they are now' (see Kaplan & Turner, 2012). TALIS is the OECD's programme to assess teacher working conditions and learning environments in schools through teacher questionnaires. It was first conducted in 2008 and the second round will be completed in 2013. A number of countries are now experimenting with linking TALIS and PISA results and if successful the assessments could be aligned from 2018. The inclusion of data on teachers' work has emerged from the contemporary global concern with teacher impact and effectiveness (e.g., OECD, 2005).

Indeed, another interviewee suggested that developing a 'measurement of teacher professional skills, competences [and] knowledge', which extends from TALIS to include teachers' practices in classrooms, is 'effectively the Holy Grail' for this aspect of the OECD's education work, particularly if it can be linked to PISA. Given the popularity of Australian research on teacher effects (Hattie, 2008), we anticipate that extending PISA's explanatory power in this way would further increase its usage by politicians and systems, and it is causing concern among teacher unions, which see risks in terms of its possible usage for performance management, the introduction of performance pay, etc.

Increasing the explanatory power of PISA analyses is closely linked to the expansion of its scope to measure a wider set of competencies, including efforts to identify the power of PISA tests items to predict future success (OECD, 2013). There is a clear relationship here between measuring more dimensions of human capital and increasing the explanatory power of the assessment. For example, innovations in assessment methodology based on the use of computers will allow the capture of data on new skills areas. For PISA 2012, participating countries and economies could opt into a computer-based assessment of problem solving skills, which enables the dynamic measurement of the processes and strategies employed by students, as they work through tasks, and not simply their capacity to arrive at the correct outcome. In 2015 this dimension will be further extended to include collaborative problem solving, expanding the dimensions of human capital being assessed to incorporate dynamic, interpersonal competencies.

Efforts to increase the explanatory power of PISA raise questions about the claims that can be supported by the evidence generated by the OECD's educational metrics and analyses. A significant issue for the Organization, as well as users of their products, is that of causation. Burns and Schuller (2007, pp. 22–23) note that:

> Causation is a particularly problematic concept, but one that demands attention from policy-makers who are responsible for allocating resources and accountable for the effects of these allocations. The debate reaches into the OECD's own work: OECD, and certainly the Education Directorate within it, would certainly claim to base policy recommendations on evidence, but the nature of evidence varies considerably… It would be fair to acknowledge that there is no unanimity within OECD on where exactly to draw the lines around what counts as evidence, nor how it might best be used.

The widespread and prominent media coverage that PISA has enjoyed, including commentary from OECD staff in national and international media, often promotes particular policy settings or education reform agendas as contributing to PISA performance. One prominent example is the development, in conjunction with the Pearson Foundation, of the *Strong Performers and Successful Reformers in Education* video series, which is based on case studies with stakeholders in strong performing or improving countries and provides stories 'behind the data' about 'what works' in these particular systems.[3] This is one way in which the OECD engages in the idea generation function described by Jakobi and Martens (2010) and its significant impact to date in this respect is clearly spurring efforts to strengthen this approach.

Conclusion

In this paper we have described the growing significance of education work within the OECD since the 1990s and the concomitant rise of PISA and the influence of the OECD in education globally. This has occurred in the context of the simultaneous 'economization' of education policy and 'educationizing' of economic policy, and as the OECD searched for a new *raison d'etre* in the post-Cold War era of neo-liberal globalization. Nations now demand data on comparative schooling performance as a surrogate measure of their global economic competitiveness and the OECD has been well positioned to redefine its technical role in education to meet these demands. The Organization has also promoted arguments for the necessity of international comparative data as a basis for national policy-making and as a complement to national testing programmes. Here we see the complementarity of global economic developments, the necessity of organizational change at the OECD in recent decades, and member nation pressures on the OECD stemming from the reworking of the nation state in the face of globalization.

In this context, the policy interests of the OECD and national economies have come together around education, evidenced in new modes of global educational governance. However, we are not suggesting that what we have here is a straightforward diffusion of OECD views within member nations. First, nations are involved in agenda-setting within the OECD and at each stage of the OECD's committee and review processes. Secondly, nations still have the capacity to mediate OECD policy recommendations and advice. There is not a simple transfer of OECD policy prescriptions to member or non-member countries, but we argue that we are seeing the constitution of a global policy field in education created through numbers, statistics and data. The influence of this global policy field within nations, for example, the US, the UK and Australia, can be seen in the wake of the 2009 PISA results and the outstanding performance of Shanghai–China.

Expanding the *scope*, *scale* and *explanatory power* of PISA is helping to create new modalities of governance for the OECD in education, both globally and nationally, with comparative data being very important in this respect. The normative governance function described by Woodward (2009) operates through framing national policy debates and contributing to policy convergence, at least at the meta-discursive level. The cognitive governance function operates through the advancement of a cooperative agenda across members and other nations through meetings and the alignment of ideas circulating through international policy communities. The palliative governance function describes the work that the OECD does in 'lubricating' international relations by providing a conducive site and organizational structure for negotiating sensitive economic policy issues (Carroll and Kellow, 2011) and in supporting the work of other international organizations and national governments. This palliative governance function comprises both the political reach and influence of the OECD—'the many ways the OECD's hidden hands massage the wider processes of global governance' (Woodward, 2009, p.75)—in combination with the capacities of its technical work to support external agencies.

We would argue, expanding on Woodward's (2009) framework, that the OECD is enacting a form of *epistemological* governance in education that spans both the cognitive and normative functions and works through the creation of new policy discourses, the conduct of peer reviews and the generation of comparative data, as suggested by Jakobi and Martens (2010). The expanding scope and scale of PISA, and associated increases in its explanatory power, are strengthening this mode of governance, which operates on and through an emergent global epistemic community of policy-makers at the OECD and within nations (Kallo, 2009). As Wiseman notes in the context of new accountabilities and evidence-informed policy at national levels:

> … what widely available international data on education has done is create an intellectual space where educational policy-making is not geographically or politically bounded but is instead bounded by the extent of the legitimated evidence used to support one decision or policy versus another. (Wiseman, 2010, p. 8)

In Bourdieu's terms, we can see the alignment of policy habitus across the global and national scales of educational governance. This habitus accepts the reliability, validity, and global (or universal) applicability of 'commensurative work' in education (Espland, 2000), seeing the globe as a commensurate space of performance measurement and assuming the right to the universal in a globalized version of Bourdieu's (1999) account of the logics of practice of bureaucratic state structures (the assumption of the 'monopoly of the universal').

The spatiotemporal expansion of PISA and the creation of other programmes such as PIAAC and PISA-based Tests for Schools are also helping to create a global infrastructure for human capital assessment. Sassen (2007) sees the production of global infrastructures that facilitate transnational flows of various kinds as central to globalization. In this respect, we suggest the OECD is enacting a mode of *infrastructural* governance, which represents a specific technical form of Woodward's palliative governance and a deterritorialization of the state infrastructural power described by Mann (1988). As Ruppert (2012) has argued in relation to national databases, the OECD's skills assessment programmes constitute a 'technocratic infrastructure for knowing… populations' that has an explicit governance purpose, although in this case with a global reach and a complex relationship with the use of data for governance purposes within nations. Indeed, one interviewee argued that 'the most effective systems are the ones which combine their international with their national assessment programmes of different types', while another emphasized the need for governments to adopt 'a perspective that looks inward and one that looks outward'. PISA contributes to the palliative governance function of the OECD by providing a global infrastructure that articulates with and makes commensurable various national and sub-national education systems and testing programmes.

Throughout the paper we have worked with a conceptualization of globalization from above. Indeed, that has been our focus in showing how the rising significance of the OECD's education work and the expansion of PISA are helping to constitute new modes of infrastructural and epistemological governance in a global education policy field, with associated effects in national governance and national education policy fields. At the same time, we need to acknowledge that nations and regions have their

own histories, cultures, political differences and are positioned in particular ways in respect of the globalizing economy, as Koh (2010) illustrates in his discussion of Singapore's strategy of 'tactical globalization'. However, the OECD's concerns for equity and human rights, and more specifically the focus in PISA on both quality and equity, reflect the underpinning assumption that all nations should be aiming for their schooling systems to be both high quality and high equity. This encourages the participation of nations with governments from across the political spectrum in the current moment of post-ideological politics (Laidi, 1998), thus enhancing the role of PISA and the OECD in instantiating new modes of global governance in education.

NOTES

[1] The slippage between the use of 'nations' and 'economies' in OECD discourse is symptomatic of its largely economic focus and the ways in which other policy domains, including education, are framed in this way.
[2] PISA already has sub-national applications through (a) the participation of cities such as Shanghai and Hong Kong; and (b) the oversampling of countries in the UK, or state systems in countries such as Australia and the US, which enables internal comparisons based on PISA
[3] See www.pearsonfoundation.org/oecd.

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