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Precision education governance and the high risks of fabrication of future-oriented learning human kinds

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ABSTRACT

Education governance is shifting towards more individually and personally tailored governance, to pre-empt futures to manage the present. Managing the present requires the fabrication of a specific type of future-oriented learning human kinds. Economically driven imperatives, strengthening transnational stakeholder networks and advances in the life and behavioural sciences are important parts of this shift while transforming the aims, content and methods of education. In terms of fabrication in the neoliberal ethos, structural problems tend to be considered to be products of innate and quantified differences in behaviour, competencies, skills and capacities. Furthermore, global, national and local changes entail even tighter economically driven governance. These changes have far-reaching implications. To date, these changes in education governance have been studied separately. By bringing together the current and emerging changes in education governance, in this paper the argument is for a new constitution: precision education governance in the fabrication of future-oriented learning human kinds.

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Precision education governance; (neo)liberalism; behaviourism; citizens

Introduction

Futures thinking offers ways of addressing, even helping to shape, the future; it is not about gazing into a crystal ball. It illuminates the ways that policy, strategies and actions can promote desirable futures and help prevent those we consider undesirable. It stimulates strategic dialogue, widens our understanding of the possible, strengthens leadership, and informs decision-making. (OECD 2021)

A collective effort would enable Europe as a whole to shape its future, deal better with the challenges it is facing and to become more resilient. One of Europe's greatest achievements was to build bridges across our continent with the creation of an area of free movement for workers and citizens. But there are still obstacles to mobility in the area of education. By 2025 we should live in a Europe in which learning, studying and doing research is not hampered by borders but where spending time in another Member State to study, learn or work is the norm. (Vice-President for Jobs, Growth, Investment and Competitiveness, Jyrki Katainen 2017)

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Transnational governing bodies such as the Organisation for Economic Co-operation and Development (OECD) and the EU, national governments, corporations, the tech industry, think tanks and NGOs, are increasingly mobilising the idea of 'the future', with their pre-emptive politics typically proceeding through an intensive commitment to 'improvement', ostensibly both societal and individual. The causes of this future-orientation are complex and relate to a set of converging global crises, to technological transformations, and to salient societal fault lines that the imperatives of neoliberal governance have so far struggled to address (e.g. Mertanen, Vainio & Brunila 2022).

At all times, education has presented itself as a promise of a better future and as an instrument of governance to foster and optimise a certain kind of human being, to shape a certain kind of society (e.g. Popkewitz 2012). However, in recent public debates and research and policy papers, education has come to be characterised by a sense of disorientation about its aims, content, methods, and values. Education is thus frequently seen as being 'in crisis'. The imperative to respond to this crisis has pushed education to 'open up' to society. Meanwhile, the economic focus of neoliberal political discourse has implied that, in a global world, success depends on education, and on equipping citizens to compete and survive in a global economy. 'Success', in turn, may be defined narrowly in terms of professional achievement and financial gain, while vocational skills and subjects have come to define what 'education' stands for (Connell 2019). Accordingly, national governments have been expected to ensure that everyone has an equal opportunity to receive education on which success depends.

The interplay of transnational governing institutions, networks and agendas have relied on visions of the future to manage the complex process of education governance and the making of future learning human kinds, 'kinds of people' who are to be acted on and are to act as if they are such 'people' (Popkewitz 2012). Multiple networks, stakeholders, technology and advances of life and behavioural sciences are drastically transforming education with the aim of improved and efficient behaviourism, optimisation and personalisation. Together they have extensive consequences in the (neo)liberal ethos. By bringing together some of the emergent changes in education governance, this paper draws attention to a constitution of new governance, precision education governance, and it examines some of its fundamental implications for education, its aims, content, and methods.

Analysing these developments, we pursued two objectives. First, we seek to map the central dimensions of precision education governance, and to offer a partial explanation for its contemporary salience. Second, in so doing, it is our objective to explore broader structural shifts that contribute to explaining the mental health turn in contemporary education systems. The consolidation of mental health as a central concern and objective of education systems coincides in temporal terms, across the past two decades, with wider institutional shifts in these systems. These shifts have been geared towards two things: first, the fostering of resilient individuals with the capacity to succeed in a range of anticipated futures, including crisis-laden ones (Naidu 2021), and, second, the accurate measurement of individuals' attendant capabilities and their development over time. Mental health and well-being and the capability to respond to distress constitute key elements of this agenda. Consequently, the rise of 'therapeutic education' (Ecclestone 2019) is closely associated with the programme of precision education, in terms of the cultural logic by which it operates (Mertanen et al. 2021). While the concept of

therapeutic education refers specifically to the growing role of mental health care and wellbeing as institutional objectives of education systems, precision education governance denotes broader sets of interventions into individuals' learning and academic development and into attendant institutionalised practices in education systems (Mertanen, Vainio, and Brunila 2021). In other words, we seek to make a twofold contribution to academic debates in education and allied fields. On the one hand, we offer a concise analysis and conceptualisation of precision education, as an increasingly prominent and therefore noteworthy mode of higher education governance. On the other hand, we draw out conceptual and empirical ties between precision education governance and a broader mental health turn in contemporary societies, and we offer a partial explanation for their contemporary salience.

Education futures and the mental health turn

The promotion of mental health and well-being has become a central concern in education governance and everyday practice at the international level. Responses to urgent mental health crises as part of the COVID-19 pandemic (Pincus et al. 2020) as well as endemic societal and educational pressures, for instance (Usher 2019; Wiens et al. 2020), have played an important role in what might be termed a 'mental health turn' in education. At the same time, this mental health turn may respond to a broader agenda to promote students' resilience and capabilities to do well in a range of future scenarios. A recent press release by the U.S. Department of Education (2021b) demonstrates these twin concerns underlying the mental health turn. Announcing the publication of a new educational resource, intended 'to provide information and resources to enhance the promotion of mental health and the social and emotional well-being among children and students', the press release quotes U.S. Secretary of Education Miguel Cardona as arguing:

> 'Our efforts as educators must go beyond literacy, math, history, science, and other core subjects to include helping students to build the social, emotional, and behavioural skills they will need to fully access and participate in learning and make the most of their potential and future opportunities [. . .]. Amid the pandemic, we know that our students have experienced so much. We can't unlock students' potential unless we also address the needs they bring with them to the classroom each day. As educators, it's our responsibility to ensure that we are helping to provide students with a strong social and emotional foundation so that they also can excel academically.' (U.S. Department of Education 2021)

Cardona here offers a twofold explanation for his department's concern with promoting students' mental health and well-being. On the one hand, he alludes to the burden placed on students by the COVID-19 pandemic and consequent disruptions of teaching and out-of-class interactions among students and between students and educators (Choi et al. 2020). On the other hand, he sets out a broader case for the enhancement of mental health, as a 'strong social and economic foundation' for academic success and the development of skills to make 'the most of their potential and future opportunities'.

The future orientation of education is central to Cardona's statement, on the one hand in the form of the need to overcome crisis, and on the other hand in the need and 'responsibility' to optimise education to enable students to fulfil their potential and maximise their life chances. We have chosen to discuss this statement as it is arguably

emblematic of a broader, internationally salient mobilisation of 'futures' as a discursive lynchpin around which academic discourses (Armour 2019), governance strategies (OECD and Centre for Educational Research and Innovation; Shi and Coates 2021), and on-the-ground practices (Bayne and Gallagher 2021) of education may be constructed. As Urry (2016) explains, 'futures' have become an important planning tool across diverse organisations in contemporary societies, and they are regularly invoked to mobilise resources to accomplish specific goals. In particular, anticipated futures now occupy a central place in education discourse, in academia and among diverse governmental and civil society organisations (Strategic Futures Group 2021; Payton et al. 2010; OECD 2021). Liang explains the rationale underlying 'futures studies' as follows:

> From the 1960s onward, a sense of emergency has become more and more noticeable in futures studies around the world. The problem of this emergency for future studies is due to human selfishness. The United Nations (UN) promotes the development of future studies because problems cannot be solved by any single country or single discipline. Simply waking people up to face a problem does not mean it really can be solved. The basis for this interdisciplinary field called futures studies are the so-called five futures: STEEP (**S**ocial Futures, **T**echnological Futures, **E**conomic Futures, **E**nvironmental Futures, and **P**olitical Futures). The essential keys for addressing the five STEEP futures are interdisciplinary ability, together with methods for systems integration. (Liang 2013, 30)

On this basis, calling for the coordinated mobilisation of resources to overcome crises and problems with a deep effect on education, Liang then sets out a model for a futures-centric education that is attentive to students' cultural background, draws on interdisciplinary resources to foster the development of skills and knowledge, and is geared towards the systematic development of future employment opportunities (Liang 2013, 31ff.). A wide range of futures-centric models for education governance and practice are now available at the international level, in diverse fields such as teacher training (Bol and Staring 2018), digital education (Bayne and Gallagher 2021), or higher education governance (Vincent-Lancrin 2004; Woods and Blass 2013). The promotion of mental health and well-being in education and effective responses to mental health crises play an important part in future education. One example of this is how the COVID-19 pandemic has already enhanced global arrangements and networks, consisting of governmental bodies, international organisations, big tech companies, and the global education industry to define transformative agendas for the crisis while developing long-term policy agendas after the emergency ends (Williamson 2020). Also, the U.S. Department of Education explains in its recently released resource for mental health in education that supporting students' well-being is central to ensuring their future success (U.S. Department of Education 2021, 54).

Invocations of anticipated futures are not merely rhetorical tools, and their sociological significance lies in the modes of governance, power structures, and attendant interactions between diverse state and private actors that they enable, facilitate, and structure. As John Urry powerfully argues, a 'key question for social science is who or what owns the future – this capacity to own futures being central in how power works' (Urry 2016, 11). Anticipated futures, as Urry recognises, possess a performative dimension, in that governments, corporations, civil society organisations and other in some sense powerful actors may bring these futures into being by systematically working towards their realisation: 'Indeed, we have seen how "powerful futures" are almost

literally "owned" by private interests, rather than shared across members of a society. Certain futures are embedded within contemporary societies, which bring them into being, being performative. Actors seek to perform or produce a future, and this can be realised as a self-fulfilling prophecy. Thinking through futures highlights something not articulated in much social science, which is that power should be viewed as significantly a matter of uneven future-making' (Urry 2016, 189). 'Futures education' discourse in this sense mobilises power structures and organisational resources to organise in the present prevalent cultural meanings, modes of governance, and modes of practice in education.

Specifically, we argue that anticipated futures are central to precision education governance as an internationally influential mode of education governance that relies on the latest insights in behavioural, psychological and neurological research in education for the 'precise' individualised and efficient shaping of human conduct, on the basis of powerful partnerships and interactions between governments, international organisations, civil society organisations, and commercial interests (Mertanen et al. 2022; Brunila & Colleagues 2019). Central to this model is the psychologisation of education governance, in terms of a focus on individual, such as students' states of mind, academic orientations, skills, and capacities as indicators of current crises and potentialities for future success. Precision education is closely bound up with the 'datafication' and 'metricisation' of social life – the growing capacity, reliant on new technologies, for surveillance, the assembly of 'big' data sets and so forth, to monitor individuals' conduct, quantify and measure it according to complex indicators, and use these indicators to assess conduct, predict behavioural outcomes, and develop attendant interventions (Koopman 2019).

The implementation of attendant precision education strategies in turn first draws on the construction of new technological infrastructures for behavioural surveillance, measurement, and intervention, on the part of both private commercial actors and states (Zuboff 2019). On the one hand, the rise of precision education is closely tied to the consolidation of a 'happiness industry' geared towards the commercialisation of individual emotions and states of mind via a range of marketable products and services (Cabanas and Illouz 2019; Davies 2015). On the other hand, there are authoritarian efforts on the part of states to monitor and modify individual thoughts and acts systematically (Byler 2022). The cultural and political logic of precision education in this sense converges with both the logic of neoliberal capitalism and its emphasis on individual autonomy and entrepreneurialism (Dardot and Laval 2013) and the logic of illiberal authoritarianism (Norris 2019). The mental health turn in education can be usefully understood against the backdrop of the rise of precision education governance and the concomitant psychologisation of education. In the following, we map precision education governance and explain its contemporary significance.

Restructuring the changing education governance and fabrication of human kinds

Discourses of emergency, crisis, and threat are used to justify various acts and interventions, which Ben Anderson (2010) argues, are a type of 'anticipatory politics' typical for governing bodies, such as states. The persistent crisis-discourse in education demonstrates how powerful (trans)governmental bodies and their strengthening global and

local networks manipulate the future, by using visions of the future to manage the complex processes of present governance (e.g. Mertanen, Vainio, and Brunila 2021). The OECD has repeatedly declared that education is in crisis as a basis for its demands for fundamental changes in education towards policy-relevant learning sciences. Education has been considered by international organisations such as the EU to be part of a 'knowledge politics', a term used to signal the importance of education for the generation of economic growth and economic recovery at times of crisis (Alexiadou 2016).

In terms of education governance, global forces and transformations are becoming stronger and taking place at a faster pace than before. We are more interconnected and interdependent now, but, as Fazal Rizvi has argued, the drivers of interconnectivity and interdependence are now different, shaped by new developments in technology and new modalities of the market (Rizvi 2019). In education, global, national, and local changes in governance entail more efficient, tailored and personalised governance of the whole human being. This requires researchers and educationalists to come up with a sharper and wider understanding and conceptualisation of changing education governance.

Precision education governance (PEG), as introduced above, is an umbrella concept developed in the pilot project led by Kristiina Brunila highlighting the efforts of multiple networks and agendas and fields of disciplines to prefigure education as they would like to see it generalised in the future. The key components of PEG refer to, first, the use of the latest insights into behavioural and life sciences in education for 'precise' individualised and efficient shaping of human conduct. Furthermore, PEG refers to the increasingly transnational and powerful nature of education governance involving such intergovernmental actors as the EU, OECD, WTO, World Bank, and UNESCO. Thirdly, PEG refers to economic imperatives and market-oriented interests and networks of private companies denoting the emergence of new compelling partnerships and agendas influencing education.

As a form of education governance, PEG highlights the multiple similarities, differences, and connections between dominant efforts to manipulate the future. PEG politics is related to current crises and predicated on the idea that the future will be different from the present. Most notably, PEG seeks to embrace the potential of the future to be more inclusive, sustainable, and equitable than the present, centrally in terms of neoliberal models of inclusivity, sustainability, and equity. It relates to changing imaginaries and rationalities in contemporary political and governance processes, institutions, political ideologies and competing and conflicting agendas and interests. It also relates to the development of professional knowledge of education in local and global policies and practices. It has implications for citizenship and to the intellectual, ethical and moral resources needed to participate in economic, social and political life (see further, Brunila & Colleagues 2019; Mertanen, Vainio, and Brunila 2021).

PEG is also a technology of governing in fabrication and manufacturing of future-oriented learning human kinds. PEG implies theories, networks, agendas, programmes and other actions to ensure the healthy, motivated, competent and skilled future-oriented learning human kinds. It provides both problems and solutions to identify the causes, reasons or grounds that produce the problems and solutions of various kinds of learning challenges.

What is particularly important to understand and acknowledge with PEG is that it not only concerns economic imperatives but also targets the core of education: the organisation and articulation of what should be taught and learned, how this should be done and why, ideas about what knowledge is most worthwhile, how teaching and learning should be organised. In the following, PEG is further discussed in terms of its central components.

Fabrication by transnational governance, marketisation and privatisation of education

> *Education is key, because it is education that equips us with the skills we need to become active members of our increasingly complex societies. It is education that helps us adapt to a rapidly changing world, to develop a European identity, to understand other cultures and to gain the new skills one needs in a society that is mobile, multicultural and increasingly digital.* (EU Commissioner Tibor Navracsics)

There is a distinct preference on the part of higher education policymakers and managers for the marketisation, privatisation, and commercialisation promoted by (trans)national governmental bodies and their policy agendas (Fleming 2021). They participate in building neoliberal precepts about education and its role in producing future human capital. Among these organisations, WTO and GATT have been influential in attaching primacy to the economic role of education (e.g. Torabian 2014). Other influential organisations include the OECD and its Programme for International Student Assessment (PISA), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the World Bank initiative for quality: Global Initiative for Quality Assurance Capacity (GIQAC). Along with the World Bank, the OECD and EU have promoted this distinctive understanding of the role of education in building human capital, to which priority is given over equally worthy educational aims. In terms of building human capital, the EU has promoted ideas relating to employability, entrepreneurialism and importance of the mobility of students and teachers, within Europe and beyond, through programmes such as Erasmus and Erasmus Mundus, as a way of preparing them for a globally integrated economy (Rizvi 2019).

New partnerships between (trans)national governing bodies, state policy actors, for-profit industries and scientific research bodies influence education governance through multiple channels (e.g. Brunila & Lundahl 2021; Saari and Säntti 2018; Rönnberg 2017; Simons, Lundahl, and Serpieri 2013; Olmedo and Ball 2015; Rizvi and Lingard 2010). Studies of the marketisation, privatisation and commercialisation of education have shown for some time that market and quasi-market forces are shaping education in a more market-oriented manner (e.g. Hogan and Thompson 2021). Privatisation such as importing ideas, techniques and practices from the private sector to education and opening education to the private sector has increased leading to a massive growth of private actors and comprehensive competition in the education field. Commercialisation, such as the creation, marketing and sale of education goods and services for commercial gain, has led to the selling of products and services to schools and municipalities. In fact, state governance and education policy reforms have enabled private actor involvement of

various kinds in public education (Ball 2012; Hogan and Thompson 2021; Ideland et al. 2020).

In alliance with marketisation, privatisation and commercialisation, developments in technology are transforming education governance. The shift from Big Science (physics) to Big Data, to Big Tech – the creation of data-driven rather than knowledge-driven science is one of the outcomes of digitalisation and datafication (Rizvi 2019; Williamson 2019; Williamson and Piattoeva 2019). In other words, educational institutions – schools, universities, and so forth – increasingly rely on the resources of Big Tech to record, quantify, and assess scholarship, teaching, learning, and learning outcomes (Williamson et al. 2020). At the same time, engagement with substantive intellectual debates – knowledge – is arguably taking a backseat to the selective instrumentalisation of such knowledge to demonstrate the achievement of quantifiable 'metrics' – key performance indicators in teacher or lecturer evaluations, grade thresholds in students' examinations, and so forth (Fleming 2021). What counts is what can be counted. In education, the connections with edu-tech-business have strengthened greatly. Large edutech companies are actively lobbying for new educational ideas that are in tune with their ideological thinking and labour interests (Williamson et al. 2020). They have compelled national systems of education to work towards more market-oriented educational reforms while arguing the crisis and failure of 'traditional education' (OECD 2021; Williamson and Piattoeva 2019).

Central to the promise of these developments is that they will enable the delivery of education to become more efficient, because never have we had the capacity to make predictions about the impact – the likelihood of success – of pedagogic interventions and remediation. It is argued that the collation of large amounts of data will enable us to generate the kind of scientifically grounded generalisations about education that were only hinted at before but never entirely realisable. These developments do not only point to future trajectories of educational provision but also have the potential to change the way in which thinking about the future is likely to be carried out, shaped increasingly by computational technologies.

Fabrication by behavioural and life sciences

PEG mixes technical and datafied components of measuring and procedures that produce principles to order the capacities and qualities of individuality (see also Lascoumes & Le Galès, 2007). This governance provides measures of 'suitable knowledge,' to assess and bring into being the abstractions (theories) about particular human kinds that are described as psychological and neurological states. These states of the child, young person or adult are 'motivation to learn,', 'positivity', 'resilience', 'self-esteem,' and adapting appropriate 'learning strategies' in organising one's life (e.g. Brunila & colleagues 2019, 2021). Public and policy discourses on education have systematically framed students as mentally and emotionally vulnerable and in need of targeted interventions to build mental well-being, resilience, and capacity to cope with distress (Ecclestone 2017). Mental wellbeing has become a central institutional objective for universities at the international level, at the same time that the provision of products and services to support this objective has been extensively commercialised. For example, where such books would have been hard to come by 15 or 20 years ago, academic publishers now

issue a wide range of self-help books to help support students with mental health concerns at university (Geng and Disney 2023). Likewise, academics' affectively charged practices of their day-to-day labour are closely enmeshed in performance management processes that govern what range of affectively charged and emotionally textured behaviours are permissible (Jørgensen and Valero 2023; Nehring and Brunila 2023). As these two examples from the world of higher education suggest, education systems have come to be deeply implicated in broader strategies of therapeutic governance that seek to structure individual subjectivities through the discourses and practices of mental health (Pupavac 2001; Zhang 2018).

The central promise of PEG in neoliberal societies is behavioural categorisation, predictions, calculations, distinctions and classifications to shape and fashion what its ideal future-oriented learning subjectivity is and how to fabricate this. As mentioned earlier, this fabrication fashions 'kinds of people' who are to be acted on and are to act as if they are such 'people' (see Popkewitz 2012). PEG offers inscriptions of cultural theses about who the future-oriented learning human kind is and who it should be – in effect producing particular human kinds. This politics of PEG focuses on the historically generated principles that govern what is thought, acted on and hoped for, and divisions produced that embody differences registered as the risks and deficits of learning human kinds.

PEG fabrication of future-oriented learning human kinds calls for fields of science in which human subjectivity is considered to be a product of innate and psychologically and neurologically understood differences in competencies, skills, and capacities to learn. This has been enhanced by the powerful crisis-discourse in education and beyond. Among other crises, we seem to be experiencing one of mental health and well-being. This kind of news is becoming more familiar, not least because transnational bodies such as the EU, OECD and UNICEF actively produce indicators of well-being. In numerous countries, this has led to various government-sponsored and market-oriented behaviour change interventions, and other support systems in education and beyond (e.g. Brunila & Colleagues 2019, 2020).

At first glance, the economic and market-oriented imperatives and strengthening networks involving competitiveness and efficiency may seem quite different from those in the behavioural and life sciences. Yet, despite their differences, both work towards a similar objective: fabricating the future-oriented learning human kind – as 'eyes' for ordering and classifying human kind's development, competences, and learning. The promise of the behavioural and life sciences is to address the whole human body, its behaviour, emotions, and brain. They offer both problems and solutions to various learning difficulties by using data analysis and computing to find and recognise students in need of assistance, as efficiently as possible. The psychological and neurological categories about motivation and capacity to learn and learning are not merely about the subjects solving problems that will 'open life opportunities' for them, as suggested. Motivation, as Danziger (1997) has historically explained, is an invention to design the interior of the child's desire.

In other words, the behavioural and life sciences offer to free subjects from their psychic, behavioural, emotional and neurological chains so that they can take control of themselves and their lives and become more self-disciplined and effective in terms of their future learning and economic imperatives. These sciences are

consonant with the political rationales that are currently at play during this period of multiple crises. Their espousal of the morality of freedom, autonomy and fulfilment provides for the mutual translatability of the languages of psychic health and individual liberty.

Fabrication according to Popkewitz (2012) provides a way to interpret the fictions of PEG about the ideal learning human kinds, children, young people and adults as particular kind of humans. However, these are not merely 'ideas' to think about actions. The subjects are simultaneously given the ontological status of 'real'. PEG theories, networks and programmes about particular kinds of ideal learning human kinds, work their ways into education as children, young people and adults become those 'things', who are 'at risk' or vulnerable, lack self-discipline and possess learning difficulties and other deficits.

PEG can be already seen in a series of existing systems in education governance and its experiments in behaviourism, optimisation and personalisation (Mertanen, Vainio, and Brunila 2021). It is also evident in the policies of a series of international organisations such as the EU, World Bank, OECD and World Economic Forum.

Precision education governance correcting and improving neoliberal societies

In education, we are in a situation in which economically driven imperatives are transforming education cultures and pedagogies (Connell 2019). This is happening while the rhetoric of equality of opportunity is linked with meritocracy. In a global world, success depends on education, on equipping citizens to survive, compete and win in a global economy. Accordingly, national governments must ensure that everyone has an equal opportunity to receive education on which success depends, while the rhetoric of the equality of opportunity is framed with meritocratic rhetoric. Of course, equality of opportunity is superficial and apparent. As we know, educational policies and practices reproduce both privileges and inequalities for example related to gender, ethnicity, sexuality, disability, and poverty ending up reproducing the social, cultural, political, and economic status quo. Indeed, inequalities seem to be rising but educational systems appear not to be capable nor willing to address inequalities which says something crucial about educational systems' aims and politics.

In terms of making future-oriented and employable human kinds, in PEG both tend to be considered as products of innate and behaviourally, psychologically and neurologically understood differences in competencies, skills and emotional capacities. Furthermore, global, national and local changes in education governance entail more efficient governance of the whole human. The future is alarming, and alternative modes of imagining education are needed, beyond the rote technocratic approach of PEG.

Education has always been about optimisation – but through PEG there is also something advanced taking place. If we consider psychologically or neurologically oriented behaviour initiatives which are popular in education now, they take part in blaming the individual for economic problems instead of focusing on social and political aspects. And this perhaps explains why all eyes are on education and why companies and policy makers and the interplay of international governing bodies like the OECD are focusing on education. So, in a way it is still about behaviourism and optimisation but

there are new interests and agendas to define how people should live their lives in this world.

There is a profound understanding about a (late) neoliberal shift in education moving education further from its societal, cultural, historical and philosophical roots towards an 'objective', 'rational', and 'measurable' direction. PEG is connected to neoliberal society and associated ideas of neoliberalism shaping and governing human conduct in the global market economy and where education is considered as though it is a marketplace. The principles of neoliberalism find their origins in the European Enlightenment and stress the moral principles of autonomy and equity. The PEG is characterised by a rethinking of the notion of autonomy, equity and tolerance and the broader role of the government in society.

To understand more deeply these changes in terms of fabricating future-oriented learning human kinds, it is important to recognise the conceptual work of neuroliberalism referring to a behavioural, psychological and neurological shaping of human conduct in the neoliberal order (Whitehead et al. 2018). Neuroliberalism as a system of government promotes market-oriented styles and could be considered to be an important part of PEG. Both denote the arrival of a more complex vision of the human subjectivity within various schemes of government- and conduct-shaping activities in education. The vision of the human condition on which these schemes are based comprehends behaviour as being more than individual acts of calculated self-interest and strategy. Both recognise the vital role of behavioural, psychic, emotional, neurological and affective responses as learning difficulties to be overcome. In a way, just as neuroliberalism does, PEG also seeks to govern in and through aspects of human behaviour that have previously been seen as either insignificant or unknowable aspects of human life, issues neoliberalism has seemed to forget.

Through revised interpretations of ideal future-oriented learning human kinds, and the application of behavioural governance, PEG seeks to extend governmental and market-oriented interests and influence further into a diverse range of life spheres. PEG is connected to neoliberal imperatives by correcting and improving them while promoting more efficient behaviourism seeking to find an answer to the question of how governance is possible through freedom and at the same time with economic imperatives. For PEG, economic imperatives provide contexts within which freedom can thrive because they encourage the entrepreneurial and employable spirit of the fabrication of learning human kinds. Understood this way, PEG promises stability to a neoliberal society. PEG links to the updated form of neoliberalism to the extent that it generally acknowledges the need for a broader role for the welfare state within society than classical liberalism, albeit largely as an arbiter of market-based transactions.

PEG reacts to the neoliberal depiction of humans as rational market actors, instead claiming that human behaviour is composed of a much more varied set of rational and irrational drivers. It reflects a response to some of the problems that neoliberalism as rationality appears to have produced but not addressed and turns them into personal deficits such as various types of behavioural and emotional problems, unhealthy lifestyles, lack of self-management and resilience, and political disengagements while it continues to support the market-based orthodoxies of neoliberal government. To these ends, while PEG reveals the flaws in the logics of neoliberalism – relating to both the nature of human behaviour within markets

and the connections between markets and human autonomy – it uses these insights to provide governmental correctives that simultaneously recognise the limits of markets and continue to support economic imperatives and modes of operation.

Conclusion – risky fabrication

Education is a political arena in which different interests engage and compete. It matters what actors, discourses, ideologies, agendas, and practices operate in the education field, since taken together, the interactions and relationships set the rules for the educational organisation and curricula, the teaching profession, students, and in the end, society. PEG can be considered to be a spatial concept, a technology to fabricate the '"future oriented"' learning human kinds without societal, cultural, historical or political connections and by focusing on the pursuit of behaviourism, optimisation, personalisation and lifelong learning. This also explains why mental health has become such a central focus of educational governance. Fabrication is part of the de-politicisation and de-contextualisation of education governance. PEG tends to rely on the Cartesian idea of subjectivity, the idea of the human as essential, as malleable and as potential. The fabrication of 'future-oriented-ness' is tied to selfhood, so that the autonomous self can discover itself through PEG, by getting rid of bodily and mental chains, and becoming a flexible, self-disciplinary future-oriented agent. The illusion of individual autonomy is created through PEG because of the 'autonomisation' and 'responsibilisation' of the self. Human potential can be fulfilled when essential human needs are encountered and realised in the right way.

The PEG sidelines moral, contextual, ethical, and political dimensions. It provides a way for the surveillance culture (the use of personal data) and corporate control of data and its use in shaping individual and community futures. PEG also highlights fundamentally different conceptions of citizenship and rights, thereby undermining democracy. In terms of mental health, PEG is here to offer ways to counterbalance the psychological and social resonance of negative emotions, anxieties, depression, and other deficits. PEG provides the skill to fabricate 'future-oriented-ness' to specialists of all types, not only behavioural and wellbeing specialists such as neurologists and psychologists but also multi-national data-driven corporations, technology industries, think tanks, policy entrepreneurs, therapy industry, personal coaches, consultants, and so on. The fabrication means addressing human beings as if they were selves of a particular type, with individualised subjectivity as well as with feelings, hopes and dreams waiting to be recognised and fulfilled to their highest potential. Such intervention appears to give education a legitimate basis in the marketised context of contemporary education. If PEG remains untouched, it is able to shape and retool to conform to this context without using force or domination, but by enabling its targets to realise what is supposedly good for them. In this way, flexibility and self-responsibility mean a diminished self, as well as limited opportunities to speak and to be heard. This is done by ensuring that one implicitly learns to find mistakes in oneself, and to blame oneself and where the PEG's alliances of behavioural and wellbeing specialists and therapy industry are to help. In this sense, the critical examination of PEG that we have continued in this paper is closely bound up

with the careful reconsideration of the strategies and ends of therapeutic and psychologised education and the increasing prevalence of mental health as a central concern of education systems at the international level.

It goes without saying that there is a need for an alternative perspective to this conventional image of subjectivity as stable, individualised and coherent. To open up channels and to avoid these fixed identities and identifications, as stated above, one must question the relationships between subject, agency and politics. One way is to begin is to ask how discursive constructions related to PEG take hold of the human subjectivity, its desires, hopes and fears, and how certain discursive constructions are appropriated while others are discarded.

Butler's (1997, 2008) ideas around subject and agency provide a way of understanding agency as a subject-in-process and as the redeployment and effect of power. Butler has argued that the subject is the permanent opportunity for a certain resignifying process. If PEG as a form of governance is a regulated process of repetition taking place in discourses, this simultaneously means that it is possible to repeat it differently. Indeed, according to Butler, it is the very constitutivity of the subject that enables her/him to act within these forms of power, which are not only regulating but also productive. Because the capacity to act is not a possession, there is no need for a pre-existing subject in agency (Butler 1997). This releases one from having to choose 'sides', such as whether something is good or bad or whether one is for or against something. For example, when involved in psychologised discourse, one is both conditioned by and dependent on the prevailing norms, and at the same time one needs to find one's way ethically and responsibly (cf. Butler 2008).

Therefore, it is crucial to find a way to analyse PEG as a site of constant negotiation and agency. This would allow for seeing that problems concerning PEG are not objects but the products of different practices, policies and power relations and therefore negotiable and changeable. In addition, this would have several implications for education. Educationalists should understand the economically driven PEG and its false hopes and promises and look more closely at how it works and the consequences. Being able to challenge the economically derived behaviourism would also provide more options for various kinds of agency in society. It is possible to transcend the dualistic order of compliance versus resistance and take up the master narratives versus resisting them. We need to consider the terms of our own existence and begin the work, together, of decomposing those elements of our world that make us, and our students, vulnerable to the latest, fashionable discourse and that, in so doing, inhibit and limit our consciousness (Davies 2005, 13).

An important step in acknowledging and troubling PEG is to be aware of the discourses through which we are spoken about and speak about ourselves. It is therefore crucial to find the fault lines in these governance discourses, question them, and then discover new discourses and new subject positions. This article has argued that PEG is permeating educational policies and practices globally and nationally. These programmes tend to categorise their targets without troubling these categorisations in any way. The categorisations that take place have consequences that result in certain outcomes which have not yet been carefully considered.

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