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The lifelong learner in cognitive capitalism: the ability-capital machine and the production of neurotic citizens

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ABSTRACT

In contemporary lifelong learning policies by the OECD and the European Union, citizens are expected to acquire knowledge, skills and attitudes that are believed to enhance individual, social and economic well-being. This article examines the current ideal of lifelong learner constructed in these policies from a governmentality perspective. The central object of theorisation is the concept of the ability-capital machine, which is introduced as a heuristic device to capture how lifelong learning policy constructs the ideal subject in the context of cognitive capitalism. This concept allows for the analysis of how subjectivities are shaped through the standardisation of competences, the demand for emotional and attitudinal reflectivity, and the promotion of self-optimisation. Additionally, drawing on the notion of neuroliberalism, the analysis explores how individual traits, emotions, and psychological attributes are brought under governing through neuroscientific and behavioural discourses in lifelong learning policies. Finally, the notion of the neurotic citizen is introduced to describe the unintended yet systemic consequences of these policies. It is contended that policies based on key competencies in lifelong learning not only construct and govern an emancipated and self-directed ability-capital machine but also evoke a self-concerned and anxious one: a neurotic lifelong learner.

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Introduction

Lifelong learning as a policy measure aims to create skilled labour market citizens, enhance competitiveness, accumulate market-valued capital, extend life expectancy and improve health and quality of life (Council of the European Union, 2006, 2018/C189; European Commission, 2019; OECD, 2019, 2021). In present lifelong learning policies, individuals are expected to fulfil common criteria related to knowledge, skills, attitudes, emotions and character traits that enhance competitiveness and employability (Fejes & Dahlstedt, 2013; Kinnari, 2020a; Normand & Pacheco, 2014).

Recent lifelong learning policies are based on individuals' self-governance: people are expected to constantly shape themselves through various methods, including self-

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observation, self-evaluation, recognition of needs and deficiencies, regular skill updates, and the shaping of attitudes and emotions. The aim is to cultivate active, entrepreneurial and contributory citizens (Fejes & Dahlstedt, 2013, Fejes, 2014; Kinnari, 2020a).

The policies of lifelong learning exist within the societal regime of truth, which in Foucauldian terms can be regarded as political rationality (Kinnari & Silvennoinen, 2023; Rose, 1999). Advanced liberal political rationalities, such as cognitive capitalism, function as frameworks for framing and shaping political objectives (Bacchi & Goodwin, 2016; Rose, 1996). In 'cognitive capitalism' (Peters & Bulut, 2011; Vercellone, 2005, 2007; Vercellone & Giuliani, 2019), individuals' cognitive and affective abilities are viewed as valuable resources – primary assets for achieving competitiveness and productivity. Presently, it appears that the economic emphasis has organically integrated itself into the sphere of lifelong learning policies (Fejes & Dahlstedt, 2013; Kinnari, 2020a; Normand & Pacheco, 2014). Since the 1990s in particular, the conception of the competitive, entrepreneurial lifelong learner has emerged as the proper mindset for citizens (Kinnari, 2020a, 2020b). In precarious cognitive capitalist societies, entrepreneurship and an individualistic lifestyle appear to serve as alternatives to the welfare state's paternalism, the entrepreneurial self being based on the expansion of the concept of human capital, which underlines the need for self-optimising and investments in the self (see, e.g. Bröckling, 2016; Laalo, 2020; Laalo et al., 2019). The emphasis lies on competencies defined by the EU (Council of the European Union, 2006; European Commission, 2019) and the OECD (2005, 2019). Competencies construct an ideal of an employable lifelong learner characterised by the knowledge, skills and motivated positive attitude tailored to the needs of cognitive capitalism (Kinnari, 2020a).

In this article, we introduce the concept of *ability-capital machine* as a heuristic device to capture how lifelong learning policies construct the ideal subject in the context of cognitive capitalism. Ability-capital machine refers to the ideal of a competitive and active citizen constructed within lifelong learning policies (see Kinnari, 2020a; Kinnari & Silvennoinen, 2023). The ability-capital machine embodies the constantly evolving employee, characterised by the norms and competencies of highly educated knowledge workers in cognitive capitalism (see Kinnari, 2020a, 2020b). We theorise the form of governmentality that underpins this construction. Drawing on the notion of *neuroliberalism*, we contribute to research on how individual traits, emotions, and psychological attributes are brought under governing through neuroscientific and behavioural discourses in education (see Zembylas, 2024). This enables us to examine how power within lifelong learning policies operates not only through external regulation, but through norms of affective self-management. According to Zembylas (2024), critical analysis of neuroliberalism and its political implications in education is essential to unpack the policy enthusiasm for neuroscience. We examine the ability-capital machine in its relationship to the demands of cognitive capitalism from the perspectives of positive psychology and behavioural economics, both of which, we argue, are serving cognitive capitalism as technologies of government (e.g. McMahon, 2015; Reveley, 2013). Thus, we present a new perspective on how the 'truth games' of positive psychology and pedagogy, as well as behavioural economics, participate in constructing the discursive truth of the ideal citizen within the politics of lifelong learning under the rationality of cognitive capitalism. Although this article draws on positive psychology and behavioural

economics, it approaches them not from within psychology, but through the lens of the critical sociology of education.

Additionally, we introduce the notion of the *neurotic citizen* (Isin, 2004) to describe the unintended yet systemic consequences of these policies: a model for individuals to internalise the imperatives of self-optimisation to the point of anxiety, inadequacy, and exhaustion. With this notion, we introduce a new viewpoint to the studies of politics of lifelong learning. We argue that the construction of the ability-capital machine as the ideal lifelong learner might expose individuals, the targets of these policies, to feelings of inadequacy, anxiety and neuroticism, as it is impossible to fully attain the required competencies and reach the ideal. In other words, we consider whether the emphasis on the self-developing individual in lifelong learning policies might produce the opposite effect, resulting in a neurotically self-developing individual who becomes emotionally reflective, constantly contemplating their fears of performance and adequacy. Particularly in a precarious society, lifelong learning, or self-improvement, can foster feelings of inadequacy and anxiety, as the required competencies encompass not only cognitive and skill-based attributes but also attitudes, affects, motivation, and personality traits. This perspective has remained unexplored in the context of lifelong learning.

To use Laurent Berlant's (2011) concept, there is 'cruel optimism' inherent in present-day policies: the pursuit of the happy, wealthy and healthy life promised by lifelong learning policies paradoxically prevents individuals from achieving these states (e.g. Black, 2022). It is relevant to reflect on the concept of cruel optimism within the context of lifelong learning, as policies often promote the idea that lifelong learning enhances employability, well-being, and economic security – despite the fact that labour market uncertainties, precarisation, and structural issues may prevent people from achieving these goals, a reality often omitted in political declarations.

Our approach leans on the perspective of governmentality (see Dean, 1999/2010; Foucault, 1988, 1991, 2007; Rose, 1999), combined with the approach of 'governing through neurosis' (Isin, 2004), which is useful in understanding how, in cognitive capitalism, governmentality has expanded to include affects, emotions, anxieties and hopes (Whitehead et al., 2019). In this framework, we perceive lifelong learning as a technology of government – a way of organising, guiding and shaping subjectivities through policy. It emphasises continuous self-development, personal responsibility, and adaptability to change, having profound implications for how individuals are positioned as citizens. Thus, lifelong learning serves as a politically and theoretically significant site through which it is possible to critically analyse how the imperative of continuous self-optimisation is legitimated, institutionalised, and internalised. This makes it a particularly relevant domain for developing the concept of the ability-capital machine, which we use to capture the subjectivity constructed within lifelong learning policies. Overall, the paper contributes to the conceptualisation of both the governing rationalities and their potential effects, situating lifelong learning as a key site in the broader apparatus of neuroliberal governmentality.

Beside the research literature, we utilise policy texts on lifelong learning by the OECD and the European Union, the two key actors in defining lifelong learning policies in European countries, to illustrate our argumentation and theoretical examination. EU and OECD are in a key role in shaping global education policy agendas (Lange & Alexiadou, 2010; Sellar & Lingard, 2013). They hold substantial discursive power in defining the

goals, priorities, and conceptual language of lifelong learning. Their documents are widely cited, adapted, and implemented across member states, and they contribute to the institutionalisation of certain forms of knowledge, values, and norms about what it means to be an educated citizen. By engaging with EU and OECD texts, we are able to trace how the logics of cognitive capitalism and neuroliberal governmentality are embedded in the conceptualisation of competences and in formation of subjectivities. These texts are central to understanding how the ability-capital machine is discursively constructed and disseminated as the ideal of lifelong learning. The purpose is not to analyse these policies empirically, but to use them to develop and illustrate theoretical insights. Our intention is to conduct a theory-driven analysis in which policy documents function as discursive material, not as objects of empirical material or systematic policy analysis. Rather, we draw upon selected EU and OECD texts in a way that parallels the use of theoretical literature – to illustrate, contextualise, and substantiate our conceptual work, particularly the development of the 'ability-capital machine' and the 'neurotic citizen'.

Governmentality in cognitive capitalism and the transformation of the productive human

Governmentality encompasses the mechanisms and strategies through which power is exercised over populations (Foucault, 1991, 1994). According to Foucault, power permeates all aspects of society, and power networks encompass everything – power struggles shape networks, societies, relationships and subjectivities (Foucault, 1980). Foucault (1994) conceived of society as composed of various 'regimes of truth' that emerge within networks of knowledge and power. Simultaneously, these regimes of truth construct subjects. In the tripartite division of power, knowledge legitimates power, which defines the conception of the subject by objectifying it.

From the perspective of governmentality, lifelong learning serves as an example of a liberalism-based autonomous power relationship (e.g. Fejes & Dahlstedt, 2013). Within lifelong learning policies, the overall aim seems to be to cultivate an autonomous and reflective learner who meets the needs of the economy (e.g. Kinnari, 2020a). The formation of a reflective self-relationship connects policy to community moral values and individual choices, that is, ethics Foucault (1997); Kinnari (2020a); Kinnari and Silvennoinen (2023). When shaping the notion of the moral subject or ideal citizenship in lifelong learning policy, the role is for individuals, as a consequence of government, to self-govern according to the objectives defined in policy (Fejes & Dahlstedt, 2013; Kinnari, 2020a).

In the present 'regime of truth' and form of capitalism – 'cognitive capitalism' (Peters & Bulut, 2011; Vercellone, 2005, 2007; Vercellone & Giuliani, 2019) – human beings are treated as resources, based on their main assets in becoming competitive and productive. Lifelong learning and continuous self-development are assumed to be necessary for nations, organisations and individuals pursuing success (e.g. Olssen, 2008; Rizvi, 2023). The enlargement of the concept of human capital in cognitive capitalism has transformed the concept of 'economic man' (Vercellone, 2005, 2007). In cognitive capitalism, the worker embodies a collection of human capital, whose value is acknowledged as the 'entrepreneurial self' making educational investments to optimise themselves (Bröckling,

2016). Emphases on abilities and capacities highlight the transformation of labour, value addition and forms of capital. In industrial capitalism, personal traits, emotional and social skills, or mental capacities were not considered important for productivity, whereas in cognitive capitalism, these and many other cognitive capacities (including abilities to learn) play a key role (Peters & Bulut, 2011; Vercellone, 2007). Efficiency manifests in learning and innovation processes, in which productive capabilities encompass knowledge, skills and attitudes, finding significance in their mutual interaction rather than in technical machines or other production facilities (Peters & Bulut, 2011; Vercellone, 2005, 2007). Further, in cognitive capitalism, emotions and temperaments are harnessed for production, and education policies have moved their emphases from knowledge-centredness to a more holistic approach acknowledging attitudes and motivations (e.g. Illouz, 2008; Koch et al., 2015).

In cognitive capitalism, the economy is linked to the qualitative characteristics of the workforce and their specialisation, as well as their economic impacts (Peters & Bulut, 2011). Workers and their assets are not seen merely as objects of economic analysis but as active subjects in fostering economic growth (Vercellone & Giuliani, 2019). According to Gary Becker (1993), the father of human capital theory, education is the most important investment target when accumulating human capital. Human capital yields profits but also reproduces social order, as some individuals earn more than others due to investing more resources in themselves. According to Becker (1962), pp. 39–49), individual specialisation in particular generates human capital and economic growth. In cognitive capitalism, the concept of human capital has expanded from skills and knowledge to attitudes, motivations, emotions and personality traits (c.f. De La Fabián & Stecher, 2017; Vercellone & Giuliani, 2019).

In making sense of today's competence-centred lifelong learning policies and their new character of the productive human, it is useful to examine two of its technologies of government that have influenced the competences defined in lifelong learning policies: positive psychology and behavioural economics. First, positive psychology has influenced governmental and educational policies, in which the new paradigm of positive pedagogy has emerged (e.g. Binkley, 2011; Reveley, 2013; Revely, 2015). Second, behavioural economics have received growing interest among policymakers to shape governmental and educational policies during recent decades (e.g. McMahon, 2015; M. Whitehead et al., 2019; Zembylas, 2024).

Accordingly, happiness and a positive attitude have become forms of capital that are promised to enable more wealth and health (c.f. De La Fabián & Stecher, 2017). This idea is prominent in positive psychology, which focuses on individuals' positive attributes (see De La Fabián & Stecher, 2017; McDonald & O'Callaghan, 2008). Seligman and Csikszentmihalyi (2000) developed the paradigm in the 1990s, aiming to improve people's well-being by focusing on their strengths and virtues rather than their mental health disorders or psychological problems. According to Seligman and Csikszentmihalyi, the adoption of the defined virtues enhances economic productivity by making individuals and communities flourish. They identified 'positive' traits[1] that prevent the onset of mental health disorders. Naming positive traits can be perceived as a form of governmentality and a means of defining what happiness entails (see Binkley, 2014; McDonald & O'Callaghan, 2008). The responsibility of being happy is handed to the individual, as happiness is thought to be the successful outcome of an individual's conscious and active self-cultivation.

While the pursuit of happiness and a happy life is an existential purpose for individuals, it also serves as a measure of national well-being and competitiveness (Binkley, 2014; De La Fabián & Stecher, 2017). Thus, it has been argued that the subjectivities based on the virtues and strengths that positive psychology constructs are tied to neoliberal political and economic discourse (Binkley, 2011). Positive psychology is enlarging the conception of human capital as it promises wealth, health and better life to individuals: happy people earn more money and live healthier and longer lives (Binkley, 2011; De La Fabián & Stecher, 2017). From the governmentality perspective, defining the characteristics of virtues and strengths is an act of normalisation and a regulatory tool for the use of selection, discrimination and control in labour markets (c.f. McDonald & O'Callaghan, 2008).

Similar to positive psychology, behavioural economics has contributed to transforming the concept of productive humans and has also affected lifelong learning policies. Indeed, according to Whitehead et al. (2019), behavioural economics stands out as the most influential paradigm within the realm of new behavioural thinking, particularly in shaping contemporary governmental policies. While the core of positive psychology is the notion of positive emotions and individuals striving for happiness, behavioural economics acknowledges human irrationality and seeks to control it to promote productivity (Jabbar, 2011; Whitehead et al., 2017). Humans are viewed as emotional actors who, in addition to reason and rationality, have a variety of personal desires and dreams, fears and anxieties (Koch et al., 2015; Pykett, 2013; Whitehead et al., 2017). Social and emotional problems are thus considered hindrances because they prevent the realisation of an individual's maximum human capital and the growth of national competitiveness (Koch et al., 2015). In addition, cognitive and emotional reflectiveness, intrinsic motivation and other 'soft skills' are seen as a competitive advantage, both for the individual and their communities (Koch et al., 2015; Pykett, 2013).

In behavioural economics, neuroscientific techniques are used to understand human behaviour from the neuroscientific perspective (Pykett, 2013). Whitehead et al. (2019) refer to Engin Isin (2004), who introduced the idea that the political rationality of emerging behavioural governmental developments is referred to as *neuroliberalism*. According to Whitehead et al. (2019), neuroliberalism refers to government primarily characterised by the utilisation of new cognitive strategies, emotions and pre-cognitive affects to ensure desired patterns of social behaviour, all while ostensibly upholding liberal principles of freedom. They perceive neuroliberalism as a framework that connects and evaluates 'the cumulative impacts of the behavioural, psychological, and neurosciences on the governmental targeting of more-than-rational life' (Whitehead et al., 2019, p. 634). Rose and Abi-Rached (2013; see also Rose 2013) argue that the growing focus on the brain reflects a broader process of the somatisation of the human, wherein both body and brain become targets of governance. This involves expert-led practices aimed at enhancing and regulating brain function, responsibilising individuals for their own neural wellbeing, and commodifying brain health. Termed 'neurological reflexivity', this process encourages individuals to understand how the brain shapes the self, while simultaneously acting to optimise it – renewing the brain becomes a means of renewing the self.

In the context of education and lifelong learning, both positive psychology and behavioural economics foster individualistic and entrepreneurial approaches (see also Zembylas, 2024). In encouraging individuals to take life in their own hands, they relate to

the emancipation of the entrepreneurial self (Bröckling, 2016). In the policies of lifelong learning, their influence is visible in the rationalising grip of the competence discourse and in the ideal it produces, which we examine next.

The competence-based ability – capital machine as an ideal of the lifelong learner

In positive psychology and pedagogy, productive qualities enabling the 'flourishing' of individuals and societies are defined. Behavioural economics, on the other hand, has focused on human irrationality. By acknowledging irrationality, the conception of human as an economic agent has expanded to include sensibilities and emotional skills. From a Foucauldian perspective, it is possible to interpret that the aforementioned technologies of government follow the same 'truth game' as the competencies defined in lifelong learning policies. These dominant paradigms have clearly influenced competencies, but they are not the only governing techniques related to the definition of competencies.

Since the early 2000s, lifelong learning policies have focused on promoting competencies that each person is expected to master and possess (Kinnari, 2020a, 2020b). In these policies, 'competence/competency' refers to a holistic combination of knowledge, skills, attitudes and values (Council of the European Union, 2006; European Commission, 2019; OECD, 2005, 2019, 2021). What is characteristic of these policies is that they define desired human attributes and abilities in minute detail, being all-encompassing and covering various aspects of life. By identifying, defining, and listing categories and sub-categories, we claim that policy texts govern by rationalising various aspects of lifelong learning. The current ideal of the lifelong learner, the 'ability – capital machine', is constructed and communicated to member states and their citizens within descriptions and adoptions of these specific forms of desired cognitive, social, emotional, behavioural and attitudinal capacities (Kinnari, 2020a, 2020b)

In every competence, certain *abilities* are defined. Similarly, every competence is constructed by certain *knowledge*, *skills*, *attitudes* and *values*. *Knowledge*, according to the European Union (Council of the European Union, 2018/C189, C189/7), comprises established facts, figures, concepts, ideas and theories that underpin the comprehension of a specific domain or subject matter. The OECD (2019, p. 74) specifies that knowledge encompasses not only theoretical concepts and ideas but also practical understanding gained through direct experience in performing specific tasks. *Skills* refer to one's ability and capacity to execute processes and utilise existing knowledge effectively to attain desired outcomes (Council of the European Union, 2018/C189,). According to the OECD (2019, p. 86), skills are abilities and capacities to carry out processes and the ability to use one's knowledge in a responsible way to achieve a goal. *Attitudes*, defined by the EU (Council of the European Union, 2018/C189, ; European Commission, 2019), encompass one's disposition and mindsets towards acting or reacting to ideas, individuals or situations. The OECD (2019, pp. 102–103) delineates *attitudes* and *values* as the principles and beliefs shaping an individual's decisions, assessments, conduct and endeavours towards personal, societal and environmental welfare.

An individualistic approach and governing the self are present in the reasoning on competencies of lifelong learning. For example, the EU (Council of the European Union, 2006, 2018/C189; European Commission, 2019) has defined eight key competencies that are believed to be essential for every citizen of Europe. These key competencies are 1) literacy competence, 2) multilingual competence, 3) mathematical competence and competence in science, technology and engineering, 4) digital competence, 5) personal, social and learning to learn competence, 6) citizenship competence, 7) entrepreneurship competence, and 8) cultural awareness and expression competence. Each competence covers dozens of specific skills, attitudes and theoretical and practical knowledge to pursue.[2] The claimed purpose of the key competencies is to enable 'personal fulfilment and development, employability, social inclusion, sustainable lifestyle, successful life in peaceful societies, health-conscious life management and active citizenship' (Council of the European Union, 2018/C189). Further, societal change, uncertainty, complexity, risks, conflicts and crises are used as justifications for the need for key competencies. For example, 'the ability to cope with uncertainty and complexity' is highlighted (European Commission, 2019, p. 11). In this articulation, competencies are presented as ways for European citizens to achieve various abilities to succeed under unstable circumstances.

Likewise, the OECD (2005, 2019) has defined various competencies that construct standardised intrapersonal and social abilities for the lifelong learner. As part of its well-known DeSeCo project (OECD, 2005) focusing on the definition of competencies to develop human capital, the organisation identified three categories of competencies and divided them into the following sub-competencies:

(1) Use tools interactively (e.g. language, technology): the ability to use language, symbols and text interactively, the ability to use knowledge and information interactively, and the ability to use technology interactively.
(2) Interact in heterogeneous groups: the ability to relate well to others, the ability to co-operate, and the ability to manage and resolve conflicts.
(3) Act autonomously: the ability to act within the 'big picture', the ability to form and conduct life plans and personal projects, and the ability to assert rights, interests, limits and needs.

In Learning Compass 2030, the OECD (2019) expanded its competence framework to seven elements: 1) core foundations, 2) transformative competencies, 3) student agency/co-agency, 4) knowledge, 5) skills, 6) attitudes and values, and 7) anticipation-action-reflection cycle. Recently, the organisation has underlined the importance of transformative competencies needed for coping with uncertainty, developing new attitudes and values, and acting productively and meaningfully. Transformative competencies such as creating new value, reconciling tensions and dilemmas, and taking responsibility involve, inter alia, the virtues of curiosity, risk taking, collaboration, empathy, resilience and controlling impulses and emotions (OECD, 2019). These competences construct standardised abilities for the lifelong learner, and the majority are related to intrapersonal skills.

When considering the definitions of competences within the regime of truth of cognitive capitalism, their significance becomes evident, shedding light on the rationale

behind their formulation. There are also discourses on democratic values, social cohesion, sustainable development and social inclusion in lifelong learning policies, but predominantly, the primary objective and hegemonic discourse of lifelong learning in EU and OECD policies is to enhance economic growth by increasing the human capital of individuals with given competences (e.g. Kinnari, 2020a; Larson & Cort, 2022; Volles, 20146). It is evident that they adhere to the same logic and conceptualisation of an entrepreneurial, competence-based citizen, legitimised by an expanded notion of human capital, as similarly constructed in positive psychology and behavioural economics.

As Foucault (2008) stated, according to the theory of human capital, individuals work for wages, with wages being the income of human capital. Human capital consists of various psychological and physical attributes that enable individuals to earn a living. The human capital of an individual is a combination of abilities, and since an individual's human capital generates income, capital and the individual become inseparable. Furthermore, when an ability cannot be separated from the individual themselves, the individual becomes a 'machine'. The 'machine' operates less effectively at the beginning of the life cycle, but productivity increases with experience. Over time, the 'machine' ages and deteriorates until it becomes non-repairable.

For the ability-capital machine, the abilities pursued by developing competences are crucial for gaining different forms of capital as assets for becoming employable and successful in life (Kinnari, 2020a). The key competences for lifelong learners construct the required abilities for being capable of gaining crucial labour market capital – knowledge, skills, attitudes and values, such as an entrepreneurial mindset and intrinsic motivation (Kinnari, 2020a, 2020b). As Foucault (2008) described, abilities are the most important asset, according to human capital theory. Various sets of capital are also essential for being sufficiently employable. The governmentality of these competencies genuinely involves 'governing the soul' (see Rose, 1996), as governmentality has expanded to encompass defined attitudes, values, personality traits and motivations.

By standardising productive abilities, the key competences of lifelong learning follow the regime of truth of cognitive capitalism. The influences of positive psychology and behavioural economics are visible in the definitions of desired personality traits and attitudes, in the emphasis of incorporating and controlling emotions, and in taking care of one's physical and mental health. For example, the significance of emotions and self-regulation in lifelong learning policies is emphasised through the increasing prominence of various self-management, subordinate, emotional and social skills, as well as other soft and life skills (e.g. Council of the European Union, 2018/C189; European Commission, 2019; OECD, 2019; Sala et al., 2020). A positive attitude is considered important (e.g. European Commission, 2019; Sala et al., 2020). In cognitive capitalism, these kinds of interpersonal and communication skills, emotional intelligence, and certain personality and character traits are seen as competitive assets, as a productive worker is required to lead themselves holistically (see e.g. Koch et al., 2015; Pykett, 2013; Whitehead et al., 2017). Further, the policies pursue abilities by underlining the importance of fostering mental and physical health (Council of the European Union, 2018/C189; OECD, 2019, p. 86; Sala et al., 2020).

In describing competencies in policy discourse, necessary knowledge, skills, attitudes and values are defined in detail, while at the same time, different spheres of life are

covered. Under each competence, dozens of detailed descriptions of desired cognitive, emotional, social, behavioural, practical and physical components of the ability – capital machine are depicted (European Commission, 2019; OECD, 2019). Within the regime of truth constructed in lifelong learning policies, the extensive range and detail of defined competencies may construct an ideal that appears difficult – if not impossible – to fully attain. This illustrates how the policy discourse produces a demanding norm that exceeds what many individuals could reasonably embody. This is where the metaphor of 'machine' seems rather appropriate. In addition, the ideal may be seen as exclusionary. While the competencies construct the ideal of the lifelong learner, another construction is produced of what constitutes undesirable lifelong learning and who falls outside of the ideal (e.g. Brine, 2006; Kauppila et al., 2020). This illustrates how governing establishes norms and ideals by excluding and positioning individuals into inherently unequal positions (Brine, 2006, Edwards, 2002; Kauppila et al., 2020). Moreover, while people who actually fulfil the ideal to some extent and benefit from it may exist, these policies and practices may just as well expose people to experiences of inadequacy and exhaustion by defining detailed demands for how people should behave. Further, by appealing to uncertainty, crises and the complexity of the surrounding world as justifications for lifelong learning, these policies participate in what can be called 'governing through neurosis' (Isin, 2004). To discuss this further, we next examine the by-product of the ideal of an ability – capital machine: the neurotic citizen.

Neurotic self-improvement as a secondary outcome of the ability – capital machine

The ideal of the self-caring and self-optimising entrepreneurial lifelong learner is, among other virtues, depicted as mentally and physically healthy (European Commission, 2019; OECD, 2019; Sala et al., 2020), positively oriented towards the future (OECD, 2019; Sala et al., 2020), active (European Commission, 2019), motivated (OECD, 2019), and unafraid of taking risks (European Commission, 2019) governed by the rationality of cognitive capitalism. However, the notion of fully mastering these competences may be seen as an unrealistic ideal for many individuals. Lifelong learners, caught in the cyclone of endless self-development in insecure precarious cognitive capitalism, must navigate desires, fears and anxieties. Bargetz (2020); see also Fournier, 2014) argued that the dominant affective structure of contemporary capitalism is anxiety. The sovereignty of (neo)liberal societies is falling apart and states cannot fulfil the promises of protection and security (Bargetz, 2020). As a consequence, the freedom and responsibility for life's crucial choices, coupled with the inadequacy induced by pressures for endless self-development and self-optimisation, exposes people to the opposite consequences of active citizenship defined in lifelong learning policies (Kinnari, 2020b). The pursuit of employability necessitates perpetual self-assessment and self-improvement, with no satisfying end state in sight.

In uncertain and competitive precarious cognitive capitalism, people are expected to create the self as a responsible, calculating risk evaluator based on prudentialism, who makes choices to maximise their own well-being (e.g. Walklate & Mythen, 2010). This 'calculating self' (Rose, 1999) illustrates the neoliberal responsibilisation of the self in a political rationality where the role of the state has diminished. However, as

behavioural economics has demonstrated, pure rational choice is highly improbable, and individuals fail to calculate the risks, threats and opportunities affecting their lives (Kahneman, 2003). This has been recognised in public policy making, and the influence of behavioural economics in national and supranational governmental policies has become significant (e.g (M. Whitehead et al., 2019). which explains why lifelong learning policies emphasise various competences related to emotional control and self-management.

Engin Isin (2004) perceives the neoliberal subject discussed in governmentality literature as one who is rational and calculates their capacities to become a competent *bionic citizen*. He criticises this idealised concept of humans as not governed by their affects and emotions. Isin (2004) argues that the governed subject of neoliberalism, with its rationality and capability of calculating the self, is accompanied by another form of governmentality – 'governing through neurosis' – where individuals are not only governed through 'rational' responsibilisation but also through their fears, anxieties and insecurities. Thus, besides the bionic citizen, he introduces another concept, the *neurotic citizen*, who has a tension-filled relationship with the concept of the bionic citizen. Sigmund Freud viewed neurosis as a sickness of guilt (Ehrenberg, 2010), while Carl Jung attributed neurosis and neurotic behaviour to failed adaptation (de Waal, 2018). According to Isin (2004), the neoliberal subject is not capable of adapting to continuous change and uncertainty.

Simultaneously, the management of the neurotic self becomes a means of control, as regulating individual fears, uncertainties and anxieties becomes the focus of control of the population (Bargetz, 2020). This population control is evident in the rhetoric of the European Commission (2019) and the OECD (2019), as the global environment is described as constantly changing and unstable, requiring citizens to navigate unfamiliar contexts and develop innovative strategies in a new technological landscape. An uncertain environment characterised by rapid technological advancements, ecological crises and insecure global political situations governs individuals to master competences in the name of the future (e.g. Fejes & Dahlstedt, 2013; Kinnari et al., 2022). In this context, it is possible to interpret lifelong learning policies as participating in a mode of governing through neurosis, where competences are framed as individual solutions to structural instability – thus fostering forms of self-governing rooted in anxiety and continuous self-monitoring.

According to Isin (2004), the bionic citizen and the neurotic citizen are not separate from each other but instead produce each other. However, unlike the bionic citizen, the neurotic citizen is governed through their own actions in response to anxieties and uncertainties. That is to say, the individual's behaviour reflects their insecurity and anxiety about unstable life decisions. Crucial life decisions become filled with fear of making mistakes. Isin (2004) argued that a neurotic subject pursues the impossible fantasy that the idealisation of the bionic citizen has created. In other words, the neurotic citizen wants security, safety, tranquillity, a perfect body, a perfect life, a magnificent career and other illusions they cannot have. In summary, in neuroliberalism, people are 'governed through their neurosis'. This means that in precarious cognitive capitalist societies, fear and insecurity govern people to be more alert to changes and alternatives in their pursuit of security (e.g. Bargetz, 2020). However, governing through neurosis does not mean that the calculating self has disappeared. The (ir)rational human needs to

govern their affects and emotions as well as their knowledge and skills in cognitive capitalism.

The idealisation of the lifelong learner as an ability – capital machine, as constructed in lifelong learning policies, is predicated upon the calculating self, supplemented by affects and emotions. Thus, the relationship between the bionic citizen and the neurotic citizen embedded in lifelong learning policies is complex. Emotions are recognised when they are regarded as competences. Similar to positive psychology, emotions and personality traits are recognised when they are seen to encourage 'emotional intelligence', which has become a form of capital that increases economic and social benefit (c.f. Illouz, 2008). Positive attitude, intrinsic motivation, self-regulation and 'soft' skills are emphasised, but alienation in a rapidly changing global environment and inadequacy caused by the constant requirement of self-development are neglected.

The importance of emotional intelligence, self-care and leadership as forms of emotional capital, as well as the significance of nutrition and sleep, are also justified with neuroscience findings on flourishing humanity and productive citizenship (see e.g. OECD, 2007). The characteristics of employability emphasised by cognitive capitalism in lifelong learning policies are thus legitimised through the means of neuroscience and the governmentality executed in the context of neuroliberalism (see Whitehead et al., 2019; Zembylas, 2024). Catherine Malabou (2008); see also Russell, 2020) argued that the brain plasticity demonstrated in neuroscience has been translated into the discourse of management as part of the flexibility required of employees. For Malabou (2008), the fear is that neuroplasticity will become a way to reproduce the subjectivity required in contemporary capitalism by promoting adaptation, flexibility and self-management.

It is justifiable to argue that neurotic citizens are constructed in lifelong learning policies as the governmentality of the key competences is governing through neurosis by creating an uncertain and unstable global environment where individuals are persuaded to believe that they need to master competences for survival and success. Similarly, the emphasis lies on the unstable and insecure future – all individuals need to master the competences for surviving in rapidly changing, complex and uncertain societies (European Commission, 2019; OECD, 2019).

Thus, the ways in which competences may be seen to govern the subject through neurosis can be illustrated in three interrelated dimensions. First, the objective of competences is legitimised through references to an unstable global environment, in which the lifelong learner is addressed as someone who must learn to manage uncertainty and anxiety – a process that can be conceptualised as governing through neurosis (see Isin, 2004). If the individual is not willing or able to master the required competences, they risk being excluded from the category of responsible and active citizens (European Commission, 2019; OECD, 2019, pp. 15–17). In this context, the prevailing insecurity and instability foster emotional states such as anxiety and stress, which may serve as mechanisms for directing individuals to pursue competence development as a condition for employability. Second, the ever-changing competence frameworks construct the ideal of a 'perfect lifelong learner', an ability – capital machine, whose process of self-development is never complete. This ideal contributes to the production of inadequacy and anxiety, as individuals relate to themselves as always insufficient – thus participating in their self-governing through neurotic self-monitoring (see Isin, 2004). Third, individuals are

expected to develop competences that enable them to cope with the stress and anxiety produced by the demands of precarious cognitive capitalism and continuous self-improvement. This includes not only recognising and rationalising one's emotional states but also engaging in practices of therapeutic self-management – such as ensuring adequate sleep, maintaining a healthy diet, and adopting emotional regulation techniques – in order to remain within the bounds of the neurotic, governable citizen, rather than becoming someone who is exhausted or excluded (see LaMarre et al., 2019). Similarly, as Rose (2019) puts it, psychiatric drugs have become an integral part of the government of mental states and human conduct. Among therapeutic techniques, many people hope that drugs will provide help and relief, and restore them to a feeling of normality.

Commercial and non-commercial actors have identified and utilised the risk of neurotic citizens becoming excluded citizens. A massive therapeutic industry exists whose purpose is to rehabilitate neurotic and excluded citizens to become responsible and active citizens. For example, solution-focused brief therapies, which adhere to a neoliberal truth game, rehabilitate individuals back into the workforce by addressing 'harmful' thought patterns (see e.g. LaMarre et al., 2019). It is evident that self-therapeutic techniques are becoming another part of lifelong learning.

Similarly, the normalising control exercised by competencies, implicitly stigmatising disabilities, incapacity and undesirable personality traits as unfavourable characteristics, is another mechanism producing exclusion and neuroticism (see also Brine, 2006; Kauppila et al., 2020). The focus on lifelong learning aimed at increasing competitiveness and continuous development of the self in the labour market places personality traits on different moral scales (e.g. Brine, 2006; Kauppila et al., 2020; Kinnari, 2020b). Key competencies in lifelong learning policies emphasise personality traits alongside skills and knowledge, such as risk-taking ability, creativity and the right attitude (Council of the European Union, 2018/C189, C189/11; OECD, 2019, p. 63). Self-care and self-management have become required citizen skills in the context of cognitive capitalism (Peters & Bulut, 2011). Politics of lifelong learning fail to account for individuals' inherent differences and whether it is possible for everyone to learn the required attitudinal and personality-related characteristics. The defined competences in lifelong learning policies construct the skills, knowledge, attitudes and values for the labour market citizen, labelling those who do not fulfil the norm as incapable.

Altogether, we argue that by defining the ideal of the ability – capital machine in lifelong learning policies, individuals are rendered not only responsible and self-optimising but also neurotic, exhausted, marginalised and excluded citizens, striving to therapise their own relationship with the world and themselves to enhance their marketability in the labour market.

Conclusion

Our analysis contributes to the growing body of work within the critical sociology of education that interrogates the psychologisation of social life. By theorising the concept of the 'ability-capital machine' and the figure of the neurotic citizen, the study underscores how psychological imperatives have become central to educational

governmentality under cognitive capitalism, thereby calling for sustained critical sociological engagement in the field of lifelong learning.

We have introduced the concept of ability – capital machine to capture how lifelong learning policies construct the ideal subject in the context of cognitive capitalism. Further, we have argued that policies based on key competencies in lifelong learning not only construct and govern an emancipated and self-directed ability – capital machine but also evoke a self-concerned and anxious one: a neurotic lifelong learner. However, it is essential to recognise that neuroticism represents one possible discursive truth and outcome of the phenomenon, while for some individuals, the norm of the ability-capital machine may appear as emancipatory and desirable. Nevertheless, the aim of this article has been to critically examine the ideal subject of lifelong learning policies, considering also its potential unintended and undesirable effects.

In lifelong learning policies, the numerous defined desirable traits represent a form of normalisation that perpetuates the prevailing hegemonic social order (e.g. Kinnari, 2020a). Competencies (Council of the European Union, 2006; European Commission, 2019; OECD, 2005, 2019) create ideals of capability and standards for a balanced but, above all, productive life. These policies (e.g. European Commission, 2018; OECD, 2019, 2021) emphasise the importance of social, emotional and attitudinal capacities from a competitiveness perspective. Abilities such as collaboration, autonomy and self-management are highlighted for their role in individual success and well-being, as well as national and regional competitiveness.

We have argued that the significance of key competences of lifelong learning is rooted in the moral order of cognitive capitalism. Behavioural economics and positive psychology have influenced the ideal of the ability-capital machine constructed in lifelong learning policies as a productive citizen. However, continuous improvement of competences within cognitive capitalism may lead to individuals perpetually grappling with feelings of inadequacy. Positive psychology and positive pedagogy emphasise certain personal traits and characteristics as fundamental for individuals to 'flourish' in life. By privileging 'productive' traits, positive psychology advances an ideal of the productive citizen. From the Foucauldian perspective, key competences operate within the same 'regime of truth', delineating specific personality traits as necessary for lifelong learners to become employable and productive citizens. Positive education, drawing on the traditions of humanistic psychology, has gained significant traction across all levels of education. Notably, positive education and psychology are far more visible within key competences than cognitive or, in particular, behaviourist approaches. The emphasis on intrinsic motivation, a positive attitude towards learning, and specific character traits within key competences closely reflects the core tenets of positive education and psychology.

The ability–capital machine is responsibilised and governed for gaining the knowledge, skills, attitudes and values of the needs of the labour market but also governed through their negative emotions and affects – anxiety, depression and stress. Among autonomous and self-directed approaches to gaining knowledge, skills, attitudes and values, the need to manage emotions amid uncertainty compels individuals towards self-regulation and emotion control. This constructs an ideal of an ability-capital machine who should be capable of rational self-optimising, including emotions and affects.

The lifelong learner constructed in policies is a subject governed through neurosis, but also an individual who should be capable of controlling their own neuroses and other mental problems. Accordingly, anxiety and inadequacy need to be controlled through emotional and affective self-governing. Governing the neuroses has become a competence to be managed by the lifelong learner. This means that the emphasis on structural problems is neglected and the emphasis is placed on the attributes of the individual. Structural issues are treated with individual therapeutic methods, without similar interest in addressing structural problems or the pathologies and toxicity of socio-political ideologies (e.g. LaMarre et al., 2019).

Lifelong learning policies have become part of a phenomenon that Laurent Berlant (2011) called 'cruel optimism', in which the pursuit of norms and promised rewards instils fear of achieving an optimistic future. As Berlant (2011, p. 1) stated, 'A relation of cruel optimism exists when something you desire is actually an obstacle to your flourishing'. Lifelong learning policies declare promises and rewards by defining competences for 'personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship and social inclusion' (European Commission, 2019, p. 4). Similarly, it is promised that competences bring well-being, and 'individual well-being helps build economic, human, social and natural capital – which, in turn, enhances individual well-being over time' (OECD, 2019, p. 8). These promises construct the idea of an omnipotent individual whose life is in their own hands.

There is an expectation that hard work will lead to professional success and personal happiness. However, structural barriers, such as economic downturns, job scarcity or systemic discrimination, hinder efforts to achieve the promised success and happiness. The narratives of fulfilment and well-being in life encourage citizens to strive to master the given competences. Emphasising the key competences in lifelong learning policies turns the ideal of the lifelong learner into a cruelly optimistic promise of success in life by encouraging continuous self-reflection and self-improvement. However, constant self-development might become an obstacle to the well-being desired by the lifelong learner.

Notes

1. These traits are: courage, future mindedness, optimism, interpersonal skills, faith, work ethic, hope, honesty, perseverance, capacity for flow and insight. Later, Peterson and Seligman (2004) expanded the list and defined characteristics for a happy person. They gathered virtues and character strengths from world religions and philosophical traditions and divided them into six core values: courage, justice, humanity, temperance, transcendence and wisdom.
2. For example, the description of necessary skills described under 'Personal, social and learning to learn competence' illustrates the EU's all-encompassing approach – this brief citation alone includes over 20 demands and definitions of how an individual should be.

   Skills include the ability to identify one's capacities, focus, deal with complexity, critically reflect and make decisions. This includes the ability to learn and work both collaboratively and autonomously and to organise and persevere with one's learning, evaluate and share it, seek support when appropriate and effectively manage one's career and social interactions. Individuals should be resilient and able to cope with uncertainty and stress. They should be able to communicate constructively in different environments, collaborate in teams and negotiate. This includes showing tolerance, expressing and understanding different viewpoints, as well as the ability to create confidence and feel empathy (European Commission, 2019, p. 11).

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