Learning 'in the hive': *Social character* and student wellbeing in the age of psychometric data

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Growing societal concern about a crisis in the wellbeing of young people has prompted a range of responses from governments and corporations, predicated on an ideal of the resilient, self-reliant individual. Behavioural economists, data scientists and educational technology companies now offer a variety of psychological interventions based on psychometric data, aimed at 'equipping' individual students with the necessary skills and character to enable them to withstand the pressures of contemporary life. As a consequence, the critical importance of mutually supportive interpersonal relationships continues to be neglected in mainstream approaches to Social and Emotional Learning (SEL). This article draws on Fromm's theory of *social character* and Zuboff's analysis of 'life in the hive' to challenge the assumptions about human behaviour underpinning data science and its application in digital tools for social and emotional learning and self-managed wellbeing. To improve students' wellbeing, we need to begin with an understanding of why they are more likely to thrive within a network of mutually supportive social relationships than a digital 'hive'.

Keywords: social character; psychometric data; Fromm; Zuboff; Social and Emotional Learning; student wellbeing

Introduction

Concerns about student wellbeing have been voiced in recent years by researchers, policymakers, teachers, parents, charities and international organisations such as the United Nations Children's Fund (UNICEF, 2013), World Health Organization (WHO,

2013) and Organisation for Economic Development and Co-operation (OECD, 2017). In the UK, one in ten students has been identified as 'at risk' of experiencing anxiety, depression, conduct disorder and self-harm (DoH/DfE, 2017, p. 7). In Australia, 24.2% of 15-19 year olds have been found to meet the criteria of 'psychological distress' (Mission Australia, 2019, p. 5). In 2018, UK's fifteen-year-olds reported the lowest levels of life satisfaction compared to students in other European countries, with fear of failure and exam pressure cited as key factors (The Children's Society, 2020). To address these concerns, advocates of Social and Emotional Learning (SEL) offer a range of psychological interventions aimed at improving emotional and mental wellbeing through developing 'learned optimism' and positive thinking (Seligman, 1991; Seligman et al., 2009), emotional intelligence (Goleman, 1995) and a 'growth mindset' (Dweck, 2006). The current vogue for character education in England rests on a renewed interest in the moral dimension of character, framed within neo-Aristotelian virtue theory of human flourishing (Arthur et al., 2017). In the USA, character education has focused on developing character 'skills' associated with success at school and work, such as the 'big five' traits of: *Openness*, *Conscientiousness*, *Extroversion*, *Agreeableness* and *Emotional Stability* (Heckman & Kautz, 2013). Character traits such as perseverance, resilience, mental toughness and grit have also been singled out as key to success in life (Duckworth, 2016; Tough, 2012). 'Resilience' has become a watchword of education policymakers in England (Hinds, 2019) as synonymous with students' ability to 'keep themselves mentally healthy' (Ofsted, 2019, p. 59).

In this context, SEL is now a major growth market, offering a range of psychological interventions and digital tools for improving student wellbeing, forecast to grow from $1.2 billion in 2019 to $3.7 billion by 2024 (MarketsandMarkets 2020). Digital

psychological interventions are based on machine learning, artificial intelligence and algorithmic analytics fuelled by psychometric data pertaining to the measurement of students' non-cognitive characteristics (Stark, 2018). The international distribution of psychometric data-based apps, wearable devices and other digital tools for tracking behavioural and emotional changes in students has been supported by an expanding 'data infrastructure', an assemblage of technology companies, investment, venture philanthropists and experts who generate 'policy-relevant knowledge' and promote new models of 'smart' schooling designed as scalable digital platforms by data scientists such as those based in Silicon Valley, California (Williamson, 2018; 2019, p.3). For example, 'Panorama Education', an American 'edtech' (educational technology) giant, developed an infrastructure to track SEL data in entire school districts. At the time of writing, Panorama Education (2021) claimed to be a global market leader supporting over 10 million students in 17,000 schools across 1,500 school districts and 49 states in the USA, as well as 15 countries throughout the world.

The emergence of transnational data infrastructures and their influence on the conduct of populations has been critiqued by researchers in political science (Isin & Rupert, 2019; Savage, 2019) and education (Allen & Bull, 2018; Lewis et al., 2019; Williamson, 2019). One of the key elements of a data infrastructure is the 'hive', a storage area for metadata on users that facilitates machine learning. For example, Facebook's 'Hive' is used to store metadata on users and their interactions separately from the 'first text' (the text written by users), as the 'second' or 'shadow text' that is unavailable to users (Zuboff, 2019, p. 483). Similarly, Google distinguishes between the *processor*, which offers users 'front end' processing activities, and the *archive* ('back end') for storing metadata, owned by Google and also unavailable to users (Lindh & Nolin, 2016). In machine learning, the 'hive mind' refers to the collective mind in

which the machines in a networked system move toward confluence and operate in unison to achieve maximum efficiency. Analogous to networks of machines and populations of bees, the concept of the human 'hive mind' has been deployed by tech designers to modify the behaviour of social media users through the pressure of the collective on each individual to 'go with the flow, stay with the herd, return to the hive, and take flight with the flock' (Zuboff, 2019, p. 436). The ubiquitous 'like' buttons, retweets, popularity tallies and other 'bright dings of pseudo-pleasure' (Lewis, 2017) are combined with personalised newsfeeds (Lindh & Nolin, 2016) within feedback loops of positive and negative reinforcement that are deployed to steer users towards the 'hive mindset' and keep them online for commercial purposes.

The risks and harms to the wellbeing of young people who spend much of their waking lives online have been well documented (Kidron et al., 2018; Twenge et al., 2018; HM Government, 2019). Other researchers, by contrast, identify a weak linkage between student wellbeing and 'digital screen-time' (Orben & Przybylski, 2019, p. 177), arguing that risks to adolescent wellbeing may arise regardless of screen-time (Ophir et al., 2019). The Covid-19 pandemic has highlighted the benefits of digital platforms such as Google Classroom in ensuring the continuity of learning during school closures, but has also given rise to serious concerns related to the accelerated digitisation of education (Decuypere et al., 2021). Decuypere et al.'s (2021) analysis of digital education platforms reveals designs that resemble the extractive technologies of social media. These incorporate similar mechanisms for behavioural modification through instant feedback and positive rewards, as well as monetising the data collected from classroom interactions.[1]

The potential of digital education platforms to impose particular data-based 'truths' on their users has heightened the need for research that adopts a 'critical

platform gaze' (Decuypere et al., 2021, p. 8). This article aims to take a 'critical gaze' at the core assumptions about human behaviour underpinning data science and the application of data-based apps for social-emotional learning. The embedding of tech designs that promote the 'hive mindset' in SEL is predicated on fostering a self-reliant (or 'app-reliant'), competitive character and therefore, negating the importance of mutually supportive interpersonal relationships. This article draws on Fromm's (1956; 1991) theory of *social character* to explain how learning 'in the hive' may diminish student wellbeing. According to Fromm, character formation is a social process that unfolds from the interplay of individual needs, material conditions and cultural beliefs. From this perspective, individual wellbeing is heavily dependent on the influences of societal structures, institutions and interpersonal relationships. Consequently, the current individualist perspective prevalent in the wider field of SEL and inherent in the design of apps for social-emotional learning is both limited and potentially detrimental to student wellbeing. Before exploring the theory of *social character* as an alternative foundation for SEL, the following section examines data scientists' assumptions about human behaviour, deployed by big tech to construct identities by algorithms (Carrington, 2018; Cheney-Lippold, 2011) and confine students' participation in social life to 'hive' behaviour.

Data science, human behaviour and SEL

Data science, also referred to as the new 'social physics' of human behaviour (Pentland, 2014), deploys scientific methods to extract knowledge from large amounts of data using machine learning and algorithms. The capacity for 'reality mining', 'automatic mapping' and 'visualisation' of behaviour in human networks is also utilised in 'emotion scanning' to measure emotional responses that up till recently defied

measurement, because they are too 'subtle' to be detected by the human eye and ear (Zuboff, 2019, p. 283). The scale of big data has been illustrated as follows by Alex Pentland, one of the world's 'most powerful' data scientists, the 'godfather' of wearable devices (MIT media lab, n.d.) and author of one of the world's largest 'living lab' datasets on friends and family:

> eighteen months of data from a small community of young families, with a wide variety of sociometric variables, including location, proximity, communication, purchasing, social media use, mobile apps, and sleep. We measured thirty behaviour variables every six minutes. This study contains a total of 1.5 million hours of quantitative observation of the human social experience. (Pentland, 2014, p. 13)

Pentland's vision of an 'incredibly rich' dataset on the behaviour of 'virtually all of humanity – on a continuous basis' is enabled through research projects such as the 'living lab', as well as data that exist in mobile phone networks, credit card databases and 'elsewhere' (p. 12). Data on students' social-emotional learning is collected by edtech companies such as Panorama Education, whereas the digital footprint of their after-school online activity is captured in the 'hive' of social media companies. The assemblage of data science, psychometric data, algorithms, edtech platforms and social media may enrich personal interactions and amplify the scale and scope of connections available to young people (Sujon & Dyer, 2020). However, three core assumptions about 'humans', human learning and wellbeing make data science problematic. This section examines each of these assumptions in turn and discusses research on the limitations, risks and problems arising from the use of data-science based technologies in education.

First, the prevailing tendency among data scientists it to assume the individual to be '*Homo imitans*', born to imitate the behaviour of others to converge towards collective intelligence:

> We can think of each stream of ideas as a swarm or collective intelligence, flowing through time, with all the humans in it learning from each other's experience in order to jointly discover the patterns of preferences and habits of action that best suit the surrounding physical and social environment. (Pentland, 2014, p. 46)

Second, the notion of the 'individual' as *Homo imitans* is related to the assumption that learning happens through imitation and is evidenced by behavioural change. For Pentland (2014), learning combines technology and behaviourist concepts such as operant conditioning for behaviour modification. Similar to the behaviourists who were interested in observable, measurable behaviour rather than consciousness, sensation, perception and volition (Watson, 1914), data scientists claim that, with 'enough' data, 'the numbers speak for themselves' and science can advance without coherent theoretical explanations of our inner states (Anderson, 2008).

This lack of interest in understanding learning and behavioural change in terms of deeper individual motivations highlights the limitations of tech devices designed for use in the classroom. For example, wearable sociometric badges capable of measuring, at millisecond intervals, the amount of face-to-face interaction, patterns of turn-taking, tone of voice and other levels of physical activity (Pentland, 2007) have been envisioned as central to the operation of new 'Smart Kindergartens' by researchers at the University of California (Park et al., 2002). In 'Smart Kindergartens', children and teachers might wear *iBadges* to capture all interactions and enable teachers and parents to fully investigate children's learning. *iBadges* could, for example, capture data on children's cognitive development, such as 'How well is student A spelling a word?' as

well as their social behaviours, such as: 'Is student C usually isolated?' (pp. 1-2). However, such data is unlikely to assist teachers and parents to understand the complex cognitive, emotional and social processes that enable children to learn spelling or connect to others.

ClassDojo, a classroom app for enhancing a 'growth mindset', 'positive thinking' and 'character' is reported to be in regular use in 95% of elementary and middle schools in the USA as well as 180 countries across the world (ClassDojo, 2021). In this app, improving behaviour has been designed as a game of collecting 'Dojo points' for good behaviour, imitating fellow classmates rewarded for compliance with classroom rules and inviting parents to monitor children's progress (Chiarelli et al., 2015; Williamson, 2017). However, through its system of points, avatars and leader boards, *ClassDojo* reconfigures behaviour into competitive point scoring and encourages children to develop an understanding of who they are through calculation and measurement against narrow representations of ideal behaviours (Manolev et al., 2019). *Class-Dojo* has also been critiqued for inculcating in children the 'Silicon Values' of individualisation and competitive connectivity (Robinson, 2020, p.3). As discussed below, the potential impact of competitive connectivity, embedded in the design of social media platforms in the form of constant social comparison and popularity metrics, includes negative self-evaluation and objectification of oneself (Zuboff, 2019; Kidron et al., 2018).

The third assumption underpinning data science links the view of the individual as a 'node' in a network to the notion of society as a 'swarm' organised 'in the image' of the machine hive, where our pull towards 'hive mind' can be utilised as scientific capital or exploited for the financial gain of big tech (Zuboff, 2019, p. 411). Any online activity leaves the 'digital bread crumbs' of metadata and the aim of having data on 'virtually all of humanity' (Pentland, 2014, p. 12) means total surveillance. Under the

conditions of light state regulation, big tech surveillance presents the danger of using data for manipulative, anti-democratic purposes (Hope, 2016) and undermining young people's rights to privacy and free speech (Shade and Singh, 2016). The 'unforgiving' internet jeopardises adolescent students' 'right to be forgotten' (Eichhorn, 2019, p. 142) and freedom to experiment with their identities without leaving a digital footprint in the 'hive'. The emergence of 'algorithmic identities', based on the collective 'hive mind' rather than unique identities of embodied individuals, means that it is the algorithm that imposes cybernetic categories over users' personal identities (Cheney-Lippold, 2011). As a result, we are not only unable to control 'who we are online', but also unable to define the very meaning of 'categories that constitute our identities' (p. 178). As discussed below, 'algorithmic identities' contribute to *alienation*, a disconnection from oneself and others as persons endowed with unique traits and identity (Fromm, 1991), with adverse consequences to student wellbeing.

Total surveillance has recently ventured into the sphere of innermost emotions (Zuboff, 2019), with future classroom applications of 'emotion scanning' including capturing hidden emotions and tracking student engagement with cameras that monitor facial blood flow (Spreeuwenberg, 2017). Whereas such applications might aim at improving wellbeing, their effectiveness will be limited if they follow behaviour modification approaches characteristic of *ClassDojo*. Due to its overarching aim of data extraction, the science of psychometric data obscures what it takes for children and adolescents to thrive psychologically as individuals living in a network of societal relationships rather than a digital 'hive'. It is to a different kind of relatedness and different understandings of character formation and student wellbeing, expounded in Fromm's theory of *social character*, that this article now turns.

Social character, 'hive mind' and student wellbeing

Fromm's (1991; 2001) insights into *social character* shed light on the socialisation of children and young people as a process that unfolds through the 'push' of material conditions and the 'pull' of cultural beliefs and political ideas, mediated by the individual's needs and emotions (Foster, 2017, p. 3). Fromm, a neo-Freudian psychoanalyst and social theorist, was concerned with the ways in which socio-economic conditions, together with the dominant political and cultural narratives, shape the psychological ('psychic') structure of character. He revised Freud's theory by taking a broader, 'sociobiological orientation' focused on questions about the physical and mental survival and wellbeing of humans (Fromm & Funk, 2019, p. 4).[2] Although Fromm wrote about 'mental health' rather than 'wellbeing', his conception of mental health is aligned to the WHO (1948) definition of health as a state of 'complete physical, psychological and social wellbeing' (as cited in Misselbrook, 2014, p. 582), as well as to contemporary definitions of 'wellbeing' that encompass biological, emotional, psychological, social and material dimensions of human experience (McLeod & Wright, 2015). Fromm's concepts of *social character*, *alienation* and *mental health* highlight problems with SEL approaches that purport to improve wellbeing and interconnectedness (OECD, 2017) whilst simultaneously promoting the self-reliant (or 'app-reliant') individual.

Social character and basic human needs

Fromm argued that 'social character' is a matrix of socially desirable personality traits shared by most members of a group that develops as a consequence of the 'basic experiences and mode of life common to that group' (Fromm & Funk, 2019, p. 8). Since its role is to support the structure of a given society, *social character* is formed as the

individual internalises external necessities, 'adjusting' himself to the culture and tasks of the socio-economic system (Fromm, 1949, p. 60). Behaviour which is consistent with external necessities brings the individual both material and psychological rewards. As long as social institutions satisfy individuals' needs, psychological forces support the social structure. For example, the desirable *social character* that supported the social structure in post-war America was a matrix of traits displayed by individuals who:

> co-operate smoothly and in large numbers; who want to consume more and more; and whose tastes are standardized and can be easily influenced and anticipated… who feel free and independent… yet willing to be commanded, to do what is expected of them, to fit into the social machine without friction (Fromm, 2001, p. 85)

At the time, traits such as flexibility, co-operation, tolerance and ambition supported the changing nature of economic production and mass consumption which, in turn, led to an emphasis on the individual as a receptacle of desire that could be satisfied by mass-produced goods. Flexibility and other teamwork traits ensured efficient mass production of these goods. Contemporary SEL approaches also single out a matrix of character traits considered vital both for individual success and the socio-economic system. For example, in alignment with Heckman and Kautz's (2013) 'big five' skills, the OECD model of wellbeing, interconnectedness, economic growth and other 'critical life outcomes' is based on SEL skills and behaviours such as: teamwork skills; 'getting along with people'; being 'always busy'; working 'long hours' and striving to reach 'a high level of mastery in some activity' (2017, pp. 8-9).

However, the contexts in which social institutions satisfy basic human needs and individuals align themselves to the tasks of the socio-economic order are never stable. Individual diversity and socio-economic changes create a 'lag' between individual needs and societal conditions that would fulfil these needs (Fromm, 2001, p. 244).

When basic human needs are neglected or suppressed as a result of socio-economic changes (as illustrated below), a 'socially patterned defect' may emerge in the *social character*, a trait that contradicts the basic needs and causes intense psychic suffering. Because the individual shares the 'defective' character trait with many others:

> he is not aware of it as a defect… What he may have lost in richness and in a genuine feeling of happiness, is made up by the security of fitting in with the rest of mankind – *as he knows them*… his very defect may have been raised to a virtue by his culture, and this may give him an enhanced feeling of achievement. (Fromm, 1991, p. 15)

Fromm argued that culture provides narrative themes that enable individuals to live with the 'socially patterned defect' without becoming mentally unwell. By elevating the defect into a 'virtue', cultural norms of the 'good' life provide 'compensatory feelings of achievement that disguise the underlying corruption of the normal demands of human flourishing' (Foster, 2017, p. 5). For example, the decline in collectivism and welfarism in contemporary neoliberal society has been accompanied by a psychic shift towards *social character* that eschews 'social embeddedness' and 'reliance on others, on institutions or on the state' (Binkley, 2014, p. 162), espousing instead the ideal of the 'self-made man'. The psychic wounds of neoliberal life have been exploited to construct a *social character* who denies vulnerability (Layton, 2008). For example, Silva's (2013, p. 109) empirical study of disadvantaged young people coming of age in the USA found that they responded to their precarious lives and experiences of 'betrayal' by the institutions of the state with efforts to 'numb the ache of betrayal and the hunger for connection' and imbibe the narrative of individualism, self-reliance and personal responsibility. The dominant political, cultural and educational narratives converge on self-reliance and the concomitant stigma of dependency (Foster, 2017) to reinvent the individual as self-sufficient and disconnected from others.

However, these narratives obscure the deep human need of relatedness and the need for a sense of identity (Fromm, 1991, p. 65). From birth, a child's sense of identity develops within relationships of dependency on significant others. A child's relationships with parents and caregivers are essential for sustaining both her physiological and psychological needs. Conversely, being abandoned or neglected is a threat to the child's very existence and a source of deep fear. As the child grows, her relatedness needs evolve from a complete dependency to an increasing autonomy and formation of social bonds beyond her immediate family and friends. But mutual dependency on others remains a basic condition of human life and even as adults we cannot be fully self-reliant and self-sufficient due to our inherently social nature. Therefore, individuality or a sense of identity is an awareness of the 'I' as a person who is *distinct but not separate from others*.

By contrast, the OECD matrix of SEL skills and characteristics frames the 'I' as standardised rather than unique, *the same but separate from others*. For example, the trait of agreeableness, is described as: 'living in harmony with others and valuing interconnectedness among all people' (2017, p. 8). Positive 'behavioural examples' cited by the OECD describe a young person who values interconnectedness as someone who finds it 'easy to get along with people' and 'respects decisions made by a group' (p. 8). The 'opposite' behaviour is manifested by a person who 'has a sharp tongue' and 'is not prone to compromises' (p. 8). However, valuing interconnectedness is not the same as the awareness of being interconnected in the sense of being *distinct but not separate from others*. The latter is far from 'easy' because of the feelings of vulnerability, hope and fear that arise from interdependency and attachment to others. The pseudo-harmony achieved through behaviours demonstrating respect for group decisions, getting along with people and avoiding 'sharp' language may, therefore, be a

sign of disconnection rather than interconnectedness. When I am *separate from others*, it does not matter what the group decision is, as long as we 'get along'. Such hollowing out of interconnectedness is also present in the 'social physics' view of individuals as 'nodes' in a network and society as 'swarm' (Pentland, 2014, p. 46). Whereas Pentland advocates the 'death of individuality' (Zuboff, 2019, p. 469), for Fromm (1991) individuality is a prerequisite for individual wellbeing. Pentland dismisses individual volition and collective participation in the realm of politics as unnecessary for operating 'in the hive', where all that matters is a 'seamless' move toward confluence and maximum efficiency. For Fromm, operating 'in the hive' would entail *alienation*, a disconnection from oneself and from others as persons endowed with unique traits, reason and conviction.

Alienation and the 'hive mind'

In Fromm's account, a sense of identity, the awareness of the 'I' as a person who is both distinct and connected to others means that, to be fully 'me', I need to relate to myself as particular, unique and 'concrete', as well as 'general' in the sense of sharing some of my qualities with others. I also need to be treated like the 'I' in this way by others. Because contemporary Western culture privileges abstract, general qualities of things and people over their concreteness and particularity, *alienation* has become its central feature:

> Instead of forming abstract concepts where it is necessary and useful, everything, including ourselves, is being abstractified; the concrete reality of people and things to which we can relate with the reality of our own person, is replaced by abstractions, by ghosts that embody different quantities, but not different qualities. (Fromm, 1991, p. 111)

The rise of digital technologies has made the process of abstraction (Fromm, 1991) even more ubiquitous. Abstraction is central to a rendition of human experience into behavioural data (Zuboff, 2019). In the social media most popular amongst UK's 5-15 year olds such as TikTck, Instagram, Facebook and Snapchat (Ofcom, 2021), 'abstraction' also refers to hiding from end-users the details pertaining to data storage and algorithms that sort content; instead content simply appears (Zulli et al., 2020). Even critical decisions over content are made 'algorithmically', not on the basis of 'the data per se' but from data 'analysed algorithmically' (Pasquale, 2015, p. 21). Abstraction is also at work in 'algorithmic identities', digitally constructed mainly on the basis of web-surfing habits of otherwise anonymous users (Cheney-Lippold, 2011). Abstract, algorithmic categorisation underlying 'algorithmic identity', combined with constant social comparison at school through testing and ranking, may all contribute to a 'mode of experience' in which the young person may experience himself 'estranged from himself', out of touch both with himself and others: 'He, like the others, are experienced as things are experienced (Fromm, 1991, p. 117).

A prolonged experience of staying online, 'in the hive' may intensify *alienation* when it replaces real-life, face-to-face contact with modified encounters and abstract, hollow rewards (Lanier, 2018; Seymour, 2019). The pull towards 'hive mind' is generated through an infrastructure of 'like' buttons, retweets, message notifications, buzzes, pings, tallies of friends or followers and other design features that 'glue users to their newsfeeds' (Zuboff, 2019, p. 457) for Fear of Missing Out (FoMO), in a belief that being 'social' and 'popular' entails staying online (Kidron et al., 2018, p. 21). Social media designers combine social pressure with persuasive design to 'tune' (manipulate) psychological rewards and punishments to keep users online (Zuboff, 2019, p. 294).

At a time when their need to form their individual identity and personal autonomy is at its most intense, adolescents are thus exposed to behaviour modification that traps them within feedback loops of constant social comparison. This may, in turn, trigger both negative self-evaluation and objectification of oneself, 'seeing oneself from the 'outside in" (Zuboff, 2019, p. 465), characteristic of *alienation*. Adolescent craving for acceptance means that conformity may become a prerequisite for having a sense of identity: 'Being acceptable really means not being different from anybody else' (Fromm, 1991, p. 150). Whereas conformity gives the adolescent a sense of security found in behaving and thinking the 'same' as others, it also traps her in a vicious circle of insecurity. When her main goal is to be approved and her paramount fear is not being approved by others, being ridiculed by the group for not conforming to the 'hive mindset' causes immense psychic pain. However, pursuing approval may lead her to presenting herself in more favourable light or abandoning her own values, thoughts and personal commitments that amount to a loss of identity. This, in turn, exacerbates *alienation* and partly accounts for the social-media related 'epidemic' of self-doubt, low self-esteem and anxiety (Kidron et al., 2018, p. 28).

As much as they crave 'the hive', young social media users are usually unaware that their encounters 'in the hive' are modified by media designers in the interests of the asymmetrical power of surveillance (Zuboff, 2019). The compulsion to be online means that much of their life and learning has been transferred to the spaces of private capital:

> through which every form of social influence - social pressure, social comparison, modelling, subliminal priming – is summoned to tune, herd, and manipulate behavior in the name of surveillance revenue. (Zuboff, 2019, p. 456)

The 'hive' presents a threat to democratic processes whereby 'the people as a whole determine their own fate and make decisions pertaining to matters of common concern'

(Fromm, 1991, p. 178). To express democratic 'will', people need to have their own convictions, coupled with an ability to exercise judgement and reason. In an alienated society, people's 'tastes, opinions and preferences' are easily manipulated by 'big conditioning machines'[3] and the 'will of the people' turns out as 'not very different from that of their choice in buying commodities' (Fromm, 1991, p. 180). Such hollowing out of the political realm has been intensified in the age of psychometric data, due to tech giants' treatment of human experience as a 'free raw material for hidden commercial practices of extraction, prediction, and sales' as well as large-scale 'behavioural modification' (Zuboff, 2019, p. xii). In education, this calls for programmes that foreground critical digital literacies (Carrington, 2018), learning for democracy (Weinberg & Flinders, 2018) and collective acts or citizenship (Jerome & Kisby, 2020).

Student wellbeing in alienated society

In Fromm's account, many mental health problems stem from *alienation* as a state when the self 'experiences itself as a thing, an investment, to be manipulated by himself and by others' (1991, p. 197). Since the concepts of health and illness are the products of culture, in an alienated society, definitions of mental health are likely to be formulated in terms of 'alienated personality'. Therefore, what is seen as 'healthy' and 'well adjusted' might be considered 'sick' from the humanistic standpoint expounded by Fromm. This means, in turn, that a successful internalisation of *social character* traits such as resilience, self-reliance and agreeableness does not guarantee student wellbeing. On the contrary, an alienated individual may successfully fulfil his social function but also suffer from anxiety or other problems. Culture provides patterns of psychic reward and compensation for 'socially patterned defects' that work for most but not all people

(Fromm, 1991). For example, whilst most people living in contemporary neoliberal society are likely to find compensation for the loss of social bonds and protections of the state in achievement, success and interconnectedness associated with agreeableness (OECD, 2017), for a minority of people, such narratives are not sufficient. By targeting the individual student and working on her *social character* rather than her basic needs, psychological interventions for 'learned optimism', 'grit' or 'growth mindset' may deepen the 'socially patterned defect' of self-reliance.

A similar problem arises in approaches to mental wellbeing issues that used to be addressed through forms of counselling and other 'talking therapies' but have recently been approached through what I would refer to as *self-managed wellbeing* that relies on digital self-help apps. For example, the English policy for 'transforming mental health provision for children and young people' (DoH/DfE, 2017, p. 3) introduced approaches to dealing with mental health problems that include digital apps available in the National Health Service apps library (NHS, 2019). These apps take students through personalised activities, mood diaries, relaxation and mindfulness exercises to reduce stress and often use avatars, such as '*Chill Panda*' that help children in relaxation techniques. Another app, '*BlueIce*', has been designed to help young people to 'manage emotions' and 'reduce urges to self-harm' (NHS, 2019). However, the app also takes users to potentially distressing information that 'more than half people who die by suicide have a history of self-harm'. Further problems arise when such apps are used to replace 'talking therapies' as cost-effective solutions when all they can offer is 'first aid'. By borrowing the feedback loop design from social media, such apps support self-correction through positive and negative reinforcement and replace direct personal contact with pre-programmed communications with digital avatars such as *Chill Panda*. The policies for character education in England have taken *self-managed wellbeing* to

an extreme by setting the expectation that character traits such as resilience are to enable students to 'keep themselves mentally healthy' (Ofsted, 2019, p. 59).

Whether or not one can find solace in compensatory cultural narratives, living the contradiction of the self-reliant, self-sufficient self who eschews dependency whilst at the same time craving connection encourages the 'closing of the mind and heart'. Living 'in the hive' engenders a closed 'hive mind'. By dismissing the inner life of consciousness and envisaging the individual as a 'node' in a network, data science eliminates the latency of a 'possible self that awaits ignition from that one spark caused by the caring attention of another embodied human being' (Zuboff, 2019, p. 468). Similarly, positive psychology and other approaches that rely on 'managing' negative emotions may contribute to the 'closing of the heart', because:

> A person who is alive and sensitive cannot fail to be sad, and to feel sorrow many times in his life… the effort to avoid the experience of pain and sorrow is only possible if we reduce our sensitivity, responsiveness and love, if we harden our hearts and withdraw our attention and our feeling from others, as well as from ourselves. (Fromm, 1991, pp. 194-5)

Fromm's concept of mental health is inextricably linked to the inner life of consciousness, thought and emotion which, like love and a sense of identity, unfold within supportive interpersonal relationships which are enabled by:

> one's experience of self as the subject and agent of one's powers by the grasp of reality inside and outside of ourselves, that is, by the development of objectivity and reason. (Fromm, 1991, p. 67)

Importantly, mental health is predicated on social structures and relations that support the basic needs of relatedness and individuality. Recognising that a range of conditions that influence the formation of *social character*: individual, as well as socio-economic,

cultural and political, has two important educational implications. First, psychological interventions that aim to improve an isolated problem, such as anxiety and anger issues or social media addiction have limited effectiveness. Second, social-emotional learning cannot be limited to a focus on the individual but rather needs to develop both teachers' and students' understanding of all elements that contribute to and influence character formation.

Conclusion

Driven by the goals of improved individual and societal wellbeing, interconnectedness and economic growth (OECD, 2017), Social and Emotional Learning approaches to shaping the capabilities of students have increasingly focused on large scale, data-driven psychological interventions. Informed by the new 'social physics' of human behaviour which assumes that individuals should be seen as 'nodes' in a network, society as a 'swarm' and identity as 'hive mind' (Pentland, 2014, p. 46), data-driven approaches to social-emotional learning obscure the deep need of relatedness and the need for a sense of identity (Fromm, 1991). In an attempt to render all human experience as data, with a view to value extraction, prediction and control, the notion of the human 'hive mind' contradicts an understanding of humans as rational, agentic, conscious individuals. The result of this contradiction, conceptually, has been a recasting of the intricate, unpredictable interpersonal connections that used to sustain us before the digital age as feedback loops of positive and negative reinforcement, utilised to steer us toward the 'hive mind'. The practical implications of this contradiction are lived in our everyday life, work and learning 'in the hive' through the paradox of technologically-enabled disconnection. This disconnection, and the resulting *alienation*, adversely affect the emotional and mental wellbeing of children and young people at a time in their life

when their need of deep and mutually supportive connection to others is at its most intense. The risks and harms of data driven programs and apps for behaviour modification make it clear that the operations of edtech companies such as Panorama Education and big tech companies such as Facebook and Google need to be met with education policy and practice to match.

However, education policies and interventions that revolve around character traits of self-reliance, self-help and personal responsibility (OECD, 2017; DoH/DfE, 2017) as the 'central nostrums' of neoliberalism (Foster, 2017, p. 1) give little, if any, consideration to the critical importance of mutually supportive relationships in the psychologically and socially healthy character formation. Given the spread of digital education platforms and apps for *self-managed* wellbeing, accelerated by the Covid-19 pandemic (Decuypere et al., 2021), it is vital that education develops students' understanding of the threats that 'the hive' presents to individual and societal wellbeing. There is, therefore, a pressing need for programmes focused on critical digital literacies (Carrington, 2018) and learning for democracy (Weinberg & Flinders, 2018) that would assist young people in understanding the risks of 'hive' mentality. Guiding students though questions about 'what data means, who gets access to what data, how data analysis is deployed, and to what ends' would offer useful starting points (boyd and Crawford, 2012, p. 664). Examples of high-quality resources on critical digital literacy that include such questions and other awareness-building tools, for example a *Fact-checking* resource (FactBar, 2018), have been at the core of the national curriculum in Finland.

Importantly, even the best resources cannot replace teachers' understanding of the psychological processes that dominate learning in 'the hive'. To explain these processes, this article discussed the psychanalytic theory of *social character* (Fromm,

1991; Fromm & Funk, 2019). Fromm's account of the inherently relational nature of character sheds light on how socio-economic conditions generate particular psychic energy and how psychic wellbeing, as well as psychic suffering, can be harnessed to advance the dominant societal goals. When psychic suffering is used to numb individuals against their own suffering and that of others (Layton, 2008; Silva, 2013), as has been the case in contemporary neoliberal society, the school has to become a site for re-educating young people in more humane ways. It is, therefore, important for educators to start from a different set of propositions about individual, society and character formation than those developed by data-driven science and its techniques for behavioural modification that pervade both learning 'in the hive', SEL interventions and neoliberal education policy. Fromm's theory of *social character* provides a coherent set of alternative propositions which could inform everyday SEL practice and enable 'the unfolding of 'other' educational possibilities' (Decuypere et al., 2021, p.12). The vital questions to guide an evaluation of SEL resources on offer or the school's own approach to character formation, pertain to the kind of relatedness and the conception of identity that enables students to thrive psychologically. This approach is predicated on an understanding of the individual as *distinct but not separate from others* rather than *the same but separate from others*.

Notes

1. Important critical investigations of the ongoing 'platformization of education' (Decuypere et al., 2021, p. 2) can be found in the Special Issue of *Critical Studies in Education* (Vol. 62, No 1).

2. For Freud, the biological function was predominantly sexual in nature and, consequently, 'character traits' were assumed to be rooted in the libido. Fromm, by contrast, used the term

'energy' in the general sense (rather than in the sense of sexual energy) to explain the desire of the living organism to survive. Consequently, his sociobiological theory identified two aspects of 'character' and their respective processes: firstly, a biological orientation and 'assimilation' (the 'mode of acquiring things' for the sake of physical survival) and, secondly, a social orientation and 'socialisation' (relatedness to others for the sake of psychic wellbeing) (Fromm & Funk, 2019, pp. 6-8).

3. In the 1950s, when Fromm and Lacan wrote about 'big conditioning machines' and the 'calculating machine' respectively, computers were mainly used for calculations. Both writers' concerns were, however, prescient of the dangers of the computer's 'mode of address to the unconscious mind and its ability to modify the person's choices, unbeknown to him' which, for Lacan, meant that the 'calculating machine' could be 'far more dangerous for man than the atom bomb' (1988, p. 88).

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