

Building minds for an uncertain future? Nurturing care in early childhood is more important than ever

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Children born today inhabit a world which is more politically and climatically unstable than any in recorded history. Emerging technologies are rapidly and radically disrupting how societies function, and this is occurring in the context of climate-related disruption. To meet these changes with creativity and bravery, we need minds which are built for adaptation, collaboration, and resilience. For decades, the science has been unequivocal that the foundations for such minds are laid in early childhood, making the case for increasing smart investment in the early years stronger than ever.

A changing world

Recent innovations including the launch of powerful artificial intelligence (AI) tools such as ChatGPT provide a glimpse into a very different future where machines increasingly take on tasks that were previously considered the preserve of humans. What these large language model and their successors mean for the near future of work remains uncertain, yet what is clear that the changes are likely to be radical. Whole cadres of workers will increasingly having their jobs done with or by machines. The prediction in 2017 that nearly 60% of all occupations are automatable, already looks potentially out of date[1]. Contrary to early predictions, even some highly skilled jobs in law, journalism and medicine may disappear entirely and machines may also play increasing roles in child development and healthcare[2]. Moreover, these technological shifts will occur against the backdrop of vast disruptions due to climate change and a breakdown of the planetary health systems on which human beings rely; changes likely to precipitate or exacerbate conflicts and displacement[3].

In this context, the pace, scale, and breadth of changes in the world that today's children will inherit are without precedent. These tectonic shifts suggest the need for a radical re-think of the role, purpose and function of current social systems. We believe that a particular focus for this re-think ought to be how, and how much, we invest in the early years of children's lives.

How minds are shaped

Children's minds develop in response to their environments. Children who grow up in stressful, harsh, unstable environments marked by multiple deprivations, score – on average – lower on tests of intelligence and memory, may devalue the future, and are at higher risk of engaging in impulsive behaviour than peers[4]. On the other hand, children raised in contexts of responsive care are more likely to develop self-regulation and empathy, and those who engage in early play and stimulation are more likely to acquire the skills to be creative, to cooperate, and to collaborate[5]. Perhaps the most important consequence of early caregiving relationships characterised by responsiveness, attunement, love and care, and deep relationships with others, is the development of an adaptability to change – what many call resilience[6]. This facilitates problem-solving, creativity and a deep sense that solutions are to be found in relationships with other people.

In a world characterised by instability brought about by disruptive AI innovations, climate stress, and emerging diseases, there are a set of attributes which are likely to become much more important, including higher-order cognitive skills like creativity and critical thinking, and interpersonal and prosocial skills and behaviours: put simply, we will need empathy, social skills, resilience and planning abilities to negotiate resource scarcity on a hotter, more crowded planet shared with powerful robots. We will also need the capacity for lifelong learning and flexibility to adapt to non-linear change in computing power. Our creativity will be critical to our ability to add value in directing AI, allowing us to use technology to complement – rather than displace – human abilities [2]. And, more than ever, originality, fluency of ideas and active learning will be needed to deal with the large amounts of information with which we are flooded[1].

The implications for action

We should be pointing to this emerging reality to argue for investing more, and better, in the early years. To build minds which can deal with the challenges of a tumultuous world, child health professionals need to make the case for anticipatory investment, noting that we currently under-invest in the early years in almost every country of the world[7].

Global policy initiatives are welcome but on their own are insufficient; they need to enable national action to justify their existence. Likewise, governments in countries at all income levels need to, drawing on their local context, radially step up investment in the early years, including by better supporting parents (including through paid leave, parenting education, and subsidised childcare) and broader public health efforts which address rather than just talk about the social determinants of health and development. Of course, these changes need to be linked to complementary ones to update and upgrade our education and social security systems throughout the life course too, but the case is especially strong for change in the early years.

Within this, addressing inequality must be central. Although we may all be in the same increasingly turbulent ocean, we are not all in the same boat. It is certain that the changes we describe above will affect people unequally, amplifying the already unacceptable inequalities that we observe both locally and globally[8]. In recognition of this, early years investments will need to reach everyone, but with particular efforts to more intensively or differentially reach and support groups which are most vulnerable. This could include supporting those working in particular industries which are susceptible to automation with AI (for example children of those working in call centres or certain manufacturing roles), focusing on geographies which are most susceptible to the impacts of climate stress, or intensively targeting those groups who we know are always at risk of being 'left behind', including children with disabilities. For this focus on inequalities to be more than just words, we believe that the child health community needs to be even more engaged in the social and political determinants of health than ever.

Finally, fundamental to all of this is a need for an acknowledgement of the current 'democratic deficit' in how young children are represented in our governance systems. Tragically, the COVID-19 pandemic illustrated how little emphasis babies' and toddlers' Rights receive in decision making; while the direct effects of the pandemic mostly spared young children, the indirect harms – whether from the impacts of loss of social interaction, disrupted nursery/home visiting services parental job loss, or the loss of family members were often devastating. Furthermore, mitigation efforts have rarely considered the youngest members of our society. We urgently need development of mechanisms to ensure that political and economic systems are more strongly influenced by the needs of future generations, building on innovations like Wales' Future Generations Commissioner.

In summary, as well as legislating to shape the development of disruptive technologies, and mitigating/adapting to climate change through bold and ambitious public policies, we must also prioritise anticipatory investment in the early years to better prepare the next generation for the very different world that they will inherit. We need to help them to build the kinds of minds, relationships, and skills that will enable them to better thrive in a radically changing and increasingly unpredictable world. The sooner – and earlier – we start, the better.

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