How does free play manifest in the digital environment?

By Kruakae Pothong, Sonia Livingstone and Angela Colvert

Children will always find ways to have fun. And they don't distinguish where they play – online or offline. But do they enjoy and benefit from all the qualities of free play when they play online? In _The Kaleidoscope of Play in a Digital World,_ Angela Colvert answers this question, piecing together research from multiple disciplines to reveal whether and how children's free play can thrive in today's digital world.

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This report advances the Digital Futures Commission's research agenda for its Play work stream, building on the _Panorama of Play_ report, and running alongside our play consultation with children and young people, parents and professionals working with children.

The Kaleidoscope of Play reveals how the fundamental qualities of free play identified in the _Panorama of Play_ report manifest in the digital environment [1]. It examines children's agency in their playful engagement with screen-based, embedded, connected, mobile and wearable technologies, and the conditions that support or undermine it. The idea of the "kaleidoscope" captures how the interaction among people, products and places shapes children's free play possibilities (see Figure 1). Every shake of the kaleidoscope remixes these factors, generating new patterns and possibilities.
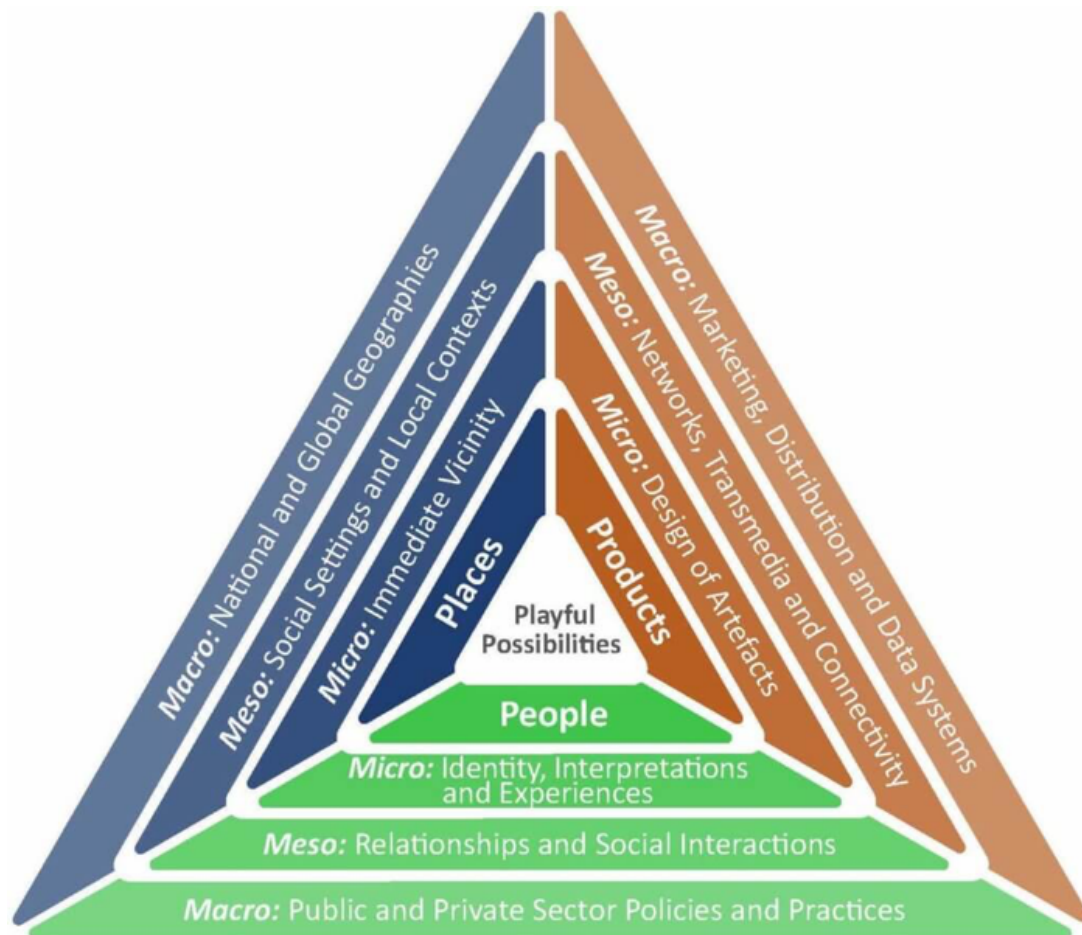
Figure 1. Kaleidoscope of Playful Possibilities: Factors that affect free play in a digital world

So, how do these factors combine in the digital environment? Since the Digital Futures Commission asks, what does good look like for children's play in a digital world, we have framed the answers in broadly positive terms. In the bullet points below, Angela Colvert identifies eight ways in which the social, material and spatial aspects of the digital environment combine to reconfigure children's possibilities for play in a digital world.

- **Accessibility**

Children's voluntary and spontaneous play in the digital environment is contingent on the accessibility of the digital resources to children in diverse circumstances. Accessibility is affected by social and economic factors as well as the materiality and functionality of products. Spatial factors also matter – not only where technology is physically situated but also the boundaries and barriers children must negotiate in order to enter virtual spaces for play.

- **Ethics and privacy**

Children's intrinsic motivation to play in the digital environment is best supported by age-appropriate design which respects children's evolving capacities. However, this can be undermined by commercial interests that shape the design of digital products and direct children's engagements across physical and digital contexts. The use of pervasive marketing strategies and persuasive design in services children use raises important ethical, privacy and child-rights concerns.

- **Adaptability (or open-ended design for flexible and generative use)**

The open-ended quality of free play is best supported by products and services that children can modify in the spur of the moment. Adaptability works when it facilitates child-led adjustments to digital functionality and structure (such as programmable devices) or supports exploration and experimentation in physical or virtual spaces (such as technology embedded in playgrounds or virtual environments that support world-building).

- **Hybridity**

The imaginative quality of play can thrive in the digital environment if digital technology affords hybrid opportunities that enable children to move across physical and digital settings and combine digital and non-digital resources in creative ways. Hybridity relates to the ways children choose to take up resources to meet their playful needs as they as they move in embodied and imaginative ways between online and offline worlds, and can be facilitated by technology in multiple ways.

- **Multi-sensory engagement**

The stimulating quality of free play can flourish in the digital environment if multi-sensory engagement is facilitated by connected, mobile, wearable technologies and tangible interfaces that produce multiple stimuli, spanning virtual and physical contexts. However, digital interactivity can be overstimulating for some children, leading to discomfort or challenging players' self-control.

- **Affective cultures**

Emotional resonance experienced in digital environments at an individual level but also, importantly, the experience is collective, merging personal and global, transcending online and offline boundaries, generating affective cultures. Digital games and social networks can provide children with valuable opportunities to explore positive as well as negative emotions with others. However, attention must be given to the ways that automated algorithms and networked systems curate what children can participate in, and to the management of toxic cultures online.

- **Safe and positive communication**

Children engage in social play, connecting with and building relationships with others across virtual and physical spaces. This is facilitated by in-game chat channels and social media, and children learn the conventions communicating through connected play (conventions of written and spoken language, avatar gestures and use of virtual spaces). However, in these social encounters lie content, contact, conduct and contract risks which require policy makers' and business interventions to mitigate them, as well as strategies to promote children's resilience so as to benefit from participatory practices.

- **Diverse representations**

The diversity in forms of play in global digital playgrounds can promote diverse representationsof varied lived experiences, abilities and identities. Play is often hyperlocal, reflecting diverse cultural heritage and subcultural interests. This can be facilitated in the digital environment but there is still a lack of acceptance of some social groups online, and certain forms of identity exploration and expression are marginalised or abused. Tackling the changes needed will require participatory design in policies and products, and cross-sector and intergenerational collaboration with underrepresented and marginalised children.

In summary

The Kaleidoscope of Play highlights hybrid, multi-sensory and communicative features as the core strength of the digital environment in promoting imaginative, stimulating, social qualities of play. However, these same features and affordances can produce adverse outcomes, so the kaleidoscope metaphor reminds us how complex are the multiple emergent configurations when people, products and places intersect, and how important, therefore, are the policies and actions of digital providers in shaping children's possibilities for free play in a digital world.

Changes are needed across the social, material and spatial aspects of the digital environment to ensure that all qualities of free play thrive. These changes include fairer accessibility, more adaptable and open-ended products, priority given to value-sensitive and age-appropriate design and more effective safety measures for individuals, especially those from disadvantaged groups, and to the play culture overall. We heard similar the calls for change from children, young people, parents and professionals in our public consultation on play.

Together, they shape our forthcoming vision of play in a digital world.

Note

1. *The Kaleidoscope of Play* examines how free play manifests in the digital environment, based on a review of literature across multiple disciplines, ranging from social sciences and humanities to human-computer interaction. The review of literature in this report encompasses theory and evidence concerning the design, development and usage of digital technologies by children and young people from birth to 17 relevant to the UK, and with cross-cultural insights.

This blog is part of the play series. You can view the rest of the blog series here.

Originally posted on https://digitalfuturescommission.org.uk/ on June 14, 2021 .