

Children's data and privacy online: *An evidence review*

Executive summary

Children's autonomy and dignity as actors in the world depends on both their freedom to engage and their freedom from undue persuasion or influence. In a digital age in which many everyday actions generate data – whether given by digital actors, observable from digital traces, or inferred by others, whether human or algorithmic – the relation between privacy and data online is becoming highly complex. This in turn sets a significant media literacy challenge for children (and their parents and teachers) as they try to understand and engage critically with the digital environment.

With growing concerns over children's privacy and the commercial uses of their data, it is vital that children's understandings of the digital environment, their digital skills and their capacity to consent are taken into account in designing services, regulation and policy. Using systematic evidence mapping, we reviewed the existing knowledge on children's data and privacy online, identified research gaps and outlined areas of potential policy and practice development.

Key findings include:

- Children's online activities are the focus of a multitude of monitoring and data-generating processes, yet the possible implications of this '**datafication of children**'¹ has only recently caught the attention of governments, researchers and privacy advocates.
- Attempts to recognise children's right to privacy on its own terms are relatively new and have been brought to the fore by the adoption of the European General Data Protection Regulation (GDPR, 2018) as well as by recent high-profile privacy issues and infringements.
- In order to capture the full complexity of children's privacy online, we distinguish among: (i) **interpersonal privacy** (how my 'data self' is created,² accessed and multiplied via my online social connections); (ii) **institutional privacy** (how public agencies like government, educational and health institutions gather and handle data about me); and (iii) **commercial privacy** (how my personal data is harvested and used for business and marketing purposes).
- The key privacy challenge (and paradox) currently posed by the internet is the simultaneous interconnectedness of voluntary sharing of personal information online, important for children's agency, and the attendant threats to their privacy, also important for their safety. While **children value their privacy and engage in protective strategies**, they also greatly appreciate the ability to engage online.
- Individual **privacy decisions and practices are influenced by the social environment**. Children negotiate sharing or withholding of personal information in a context in which networked communication and sharing practices shape their decisions and create the need to balance privacy with the need for participation, self-expression and belonging.
- Institutionalised aspects of privacy, where data control is delegated – voluntarily or not – to external agencies such as government institutions, is becoming the norm rather than the exception in the digital age. Yet there are **gaps in our knowledge of how children experience institutional privacy**, raising questions about informed consent and children's rights.
- The invasive tactics used by marketers to collect personal information from children have aroused data privacy and security concerns particularly relating to children's ability to understand and consent to such datafication and the need for parental approval and

¹ 'Datafication' refers to the process of intensified monitoring and data gathering in which people (including children) are quantified and objectified – positioned as objects (serving the interests of others) rather than subjects (or agents of their own interests and concerns); see Lupton, D. and Williamson, B.

(2017) The datafied child: The dataveillance of children and implications for their rights. *New Media & Society* 19(5), 780-94.

² 'Data self' refers to all the information available (offline and online) about an individual.

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- supervision, especially for the youngest internet users. While the commercial use of children's data is at the forefront of current privacy debates, the empirical evidence related to children's experiences, awareness and competence regarding privacy online lags behind. The available evidence suggests that **commercial privacy is the area where children are least able to comprehend and manage on their own.**
- **Privacy is vital for child development** – key privacy-related media literacy skills are closely associated with a range of child developmental areas. While children develop their privacy-related awareness, literacy and needs as they grow older, even the oldest children struggle to comprehend the full complexity of internet data flows and some aspects of data commercialisation. The child development evidence related to privacy is insufficient but it undoubtedly points to the need for a tailored approach which acknowledges developments and individual differences amongst children.
 - Not all children are equally able to navigate the digital environment safely, taking advantage of the existing opportunities while avoiding or mitigating privacy risks. The evidence mapping demonstrates that **differences among children (developmental, socio-economic, skill-related, gender- or vulnerability-based) might influence their engagement with privacy online**, although more evidence is needed regarding the consequences of differences among children. This raises pressing questions for media literacy research and educational provision. It also invites greater attention to children's voices and their heterogeneous experiences, competencies and capacities.
 - Privacy concerns have intensified with the introduction of digital technologies and the internet due to their capacity to compile large datasets with dossiers of granular personal information about online users. **Children are perceived as more vulnerable than adults to privacy online threats** due to their lack of digital skills or awareness of privacy risks. While issues such as online sexual exploitation and contact with strangers are prominent in current debates, more research is needed to explore potential links between privacy risks and harmful consequences for children, particularly in relation to longer-term effects.
 - No longer about discipline and control alone, surveillance now contains facets of 'care' and 'safety', and is promoted as a reflection of responsible and caring parents and is thus normalised. **Risk aversion, however, restricts children's play, development and agency**, and constrains their exploration of physical, social and virtual worlds.
 - While the task of balancing children's independence and protection is challenging, evidence suggests that **good support can make an important difference to children's privacy online**. Restrictive parenting has a suppressive effect, reducing privacy and other risks but also impeding the benefits of internet use. Enabling mediation, on the other hand, is more empowering in allowing children to engage with social networks, albeit also experiencing some risk while learning independent protective behaviours.
 - While the evidence puts parental enabling mediation at the centre of effective improvement of children's privacy online, platform and app features often prompt parental control via monitoring or restriction rather than active mediation. **Media literacy resources and training for parents, educators and child support workers** should be considered as the evidence suggests important gaps in adults' knowledge of risks and protective strategies regarding children's data and privacy online.
 - The evidence also suggests that **design standards and regulatory frameworks are needed which account for children's overall privacy needs across age groups**, and pay particular attention and consideration to the knowledge, abilities, skills and vulnerabilities of younger users.

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