KOALA: Kids Online Anonymity and Lifelong Autonomy

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Children growing up in a "smart" society

In the UK,
- 52% of 3-4yo go online, for nearly 9h a week
- 44% 5-10yo have been provided with their own tablets

Better the Devil You Know:
Exposing the Data Sharing Practices of Smartphone Apps

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X-Ray Refine: Supporting the Exploration and Refinement of Information Exposure Resulting from Smartphone Apps

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"**9 in 10** Google Play Store apps are sending data to Google"

"participants demanded more control and transparency"

Financial Times: https://ig.ft.com/mobile-app-data-trackers/.
Binns et al. "Measuring third party tracker power across web and mobile". TOIT. 18 (4) p52.

Family apps are amongst the top associated with distinct trackers

Super genre	# apps	Med.	Q1	Q3	>10	None
News	26281	7	4	11	29.9%	6.5%
Family	8930	7	4	11	28.3%	7.2%
Games & Entertainment	291952	6	4	10	24.5%	7.3%
Art & Photography	27593	6	4	10	16.8%	3.6%
Music	65099	6	4	8	13.5%	4.1%
Health & Lifestyle	163837	5	3	8	15.4%	9.0%
Communication & Social	39637	5	2	8	16.2%	13.4%
Education	79730	5	2	8	13.3%	11.9%
Productivity & Tools	265297	5	2	8	11.9%	13.5%

"Third party tracking in the mobile ecosystem." Proc. of the 10th Web Science, 2018.

Data tracking and surveillance raise less widely known privacy concerns

Press Start to Track?: Privacy and the New Questions Posed by Modern Videogame Technology

American Intellectual Property Law Association (AIPLA) Quarterly Journal, 2014, Forthcoming

60 Pages • Posted: 21 Aug 2014

Joe Newman
Future of Privacy Forum

Joseph Jerome
Center for Democracy & Technolc

Christopher Hazard
Hazardous Software Inc

Date Written: August 1, 2014

"detailed information from the player's actions within the game world … may be analysed to create in-depth profiles of a player's cognitive abilities and personality"

The KOALA Project

- Received ~£68K from Oxford IAA between December'17 and March'19

- Support secondment to Anna Freud Center for Children and Families and evidenced-based impact collection

Aims and Objectives

- To assess how our existing privacy management tool can be adapted to help educators and parents mediate children's choice of technologies and their awareness of risks

- To work together with children's mental health researchers to explore the impact of digital technologies on young children

Report 1:
- Online survey to >250 families
- **Explore** challenges faced by parents & approaches for safeguarding young children

Report 2:
- Semi-structured interviews with 20 families
- **Understand** parents' mediation approaches for safeguarding young children and children's perspectives

Report 3:
- Focus groups with nearly 30 children from 16 different schools
- **Identify** children's current knowledge gaps and design inputs to our digital intervention

Report 4:
- Co-Design workshop with 6 families
- **Collect** feedback to improve our current app prototype

February 2018   April 2018   December 2018   March 20119
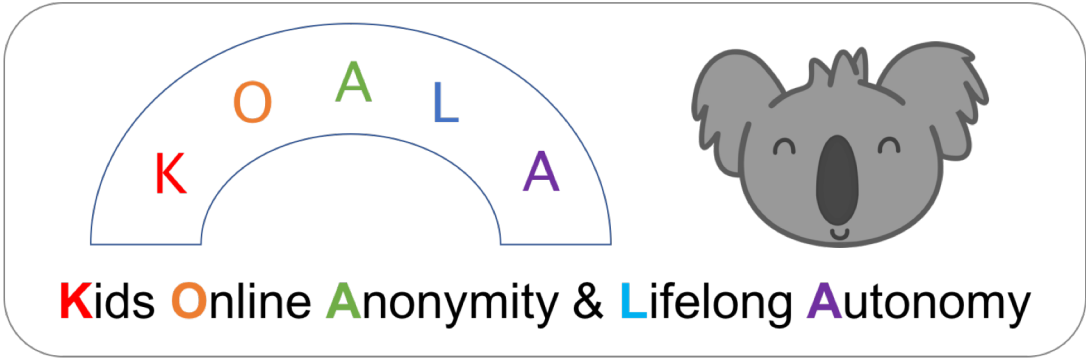
S — Select apps from 'kids' or 'family' categories

H — Talk to your children about asking you for **H**elp when they need it.

A — **A**void providing any sensitive personal information to the app.

R — Check 'Age **R**ating' of the apps.

P — Check the app's **P**rivacy **P**ermissions.

K O A L A

Kids **O**nline **A**nonymity & **L**ifelong **A**utonomy

Demo

Impact from KOALA

REACHED OUT TO 16 SCHOOLS AND 50 FAMILIES

CONTRIBUTED TO POLICY DEVELOPMENT: ICO'S CODE FOR AGE APPROPRIATE DESIGN

EXPANDED OUR NATIONAL AND INTERNATIONAL RESEARCH NETWORK

INCREASED OXFORD'S RESEARCH VISIBILITY IN ALGORITHMIC CHILDREN

Next Step

Research grant submissions

- Investigating impact on children's digital wellbeing
- Developing education materials for teachers to facilitate UK children development of digital literacy, particularly regarding online data privacy
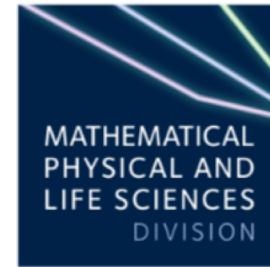
→

Continue the tool development

- Addressing a critical market gap for parental mediation of children's use of digital technologies
- Ongoing recruitment for a small scale field trial

Standards of age-appropriate design

1. Best interests of the child
2. Age-appropriate application
3. Transparency
4. Detrimental use of data
5. Policies and community standards
6. Default settings
7. Data minimisation
8. Data sharing
9. Geolocation
10. Parental controls
11. Profiling
12. Nudge techniques
13. Connected toys and devices
14. Online tools
15. Data protection impact assessments
16. Governance and accountability

Age appropriate design: a code of practice for online services

Consultation document

ico.
Information Commissioner's Office

We thank all the schools and families for their time and support!

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KOALA Project web site: https://sites.google.com/view/koala-project-ox/