SHORT TERM SCIENTIFIC MISSION (STSM) – SCIENTIFIC REPORT

The STSM applicant submits this report for approval to the STSM coordinator

Action number: IS1410
STSM title: The Internet of Toys: Parental Guidance and Design Considerations
STSM start and end date:

- **STSM: 11 December 2017 – 10 January 2018 Short Term Scientific Mission (STSM) COST ACTION IS1410 (DigiLitEY), call number 5.**
- **FWO Travel Grant: Long stay abroad FWO Grant: 11 January 2018 – 10 April 2018.**

Grantee name: Bieke Zaman

PURPOSE OF THE STSM

The central aim of my research stay abroad was to gain a multi-faceted understanding of the emerging phenomenon of connected toys. The research activities that I carried out in Perth, Australia, constitute an essential part of my research program on children, digital media, parental mediation, and emerging technologies.

The goal of **WP1** was to study connected toys from a design perspective. On the one hand, the aim was to shed light on how children's participation in the design process of connected toys can empower children and other stakeholders, and what kind of knowledge is generated and validated in this context, see also RQ 1.1. On the other hand, I engaged in a critical reflection of the design qualities of a selection of connected toys from the theoretical, post-humanist perspective of animistic design (Marenko & Van Allen, 2016), see also RQ1.2. By adhering to the latter perspective, I aimed for design contributions at an intermediate-level, i.e., the middle territory between the concrete, isolated particular instances that are only applicable to the designs under investigation, and the abstract, generalizable level of theoretical contributions that are applicable to a broader phenomenon (Barendregt, Torgersson, Eriksson, & Börjesson, 2017; Höök & Löwgren, 2012). The following research questions have been successfully addressed:
- *RQ 1.1 How can children be involved in a participatory design process of connected toys?*
- *RQ 1.2 To which extent and how does an animistic design perspective foster a fruitful exploration of the design qualities of connected toys?*

The goal of **WP2** was to describe and offer theoretical explanations for the dominant public discourses about parental guidance of children's internet use. Given the localized context in which families with children use the internet and the local frameworks through which public narratives are constructed, promoted and interpreted (Bulger, Burton, O'Neill, & Staksrud, 2017), I focused on Australia and Belgium as two regions that were expected to yield distinct dominant narratives, and successfully answered the following research question:
- *RQ 2.1 What are the dominant online public discourses about (parental guidance of) young children's digital media use in Australia and in Belgium?*

I also defined 7 sub questions that followed Gee's "seven building tasks of language" (Gee, 2011, pp. 17–18).

The goal of **WP3** was to provide a rich, contextualized understanding of how parents of young children guide their children's digital media use, and how young children engage in online and offline play. I also investigated possible cultural differences between Belgian and Australian families. In particular, the following research questions have been addressed:
- *RQ 3.1 How do Belgian and Australian families with young children engage with connected toys in the home?*

RQ 3.2 What are Belgian and Australian parents' attitudes, beliefs, perceived risks and benefits, and guidance strategies towards young children's digital play and (connected) toy activities in Australian and Belgian families?

DESCRIPTION OF WORK CARRIED OUT DURING THE STSMS

WP1: *Desk research at ECU campus, participation in Values Impact Forum (22-23 February, Perth, University of WA), data analysis and expert evaluation* of data that had already been gathered in the context of a Belgian national project (2014-2015) on the topic of connected toys, for which I received IWT iMinds funding as main research lead. This research component in

Perth benefitted from discussions with international scholars from ECU, and the insights are expected to directly feed into and Australian Research Council (ARC) Discovery project (DP180103922, *The Internet of Toys: Benefits and risks of connected toys for children*, principal investigator Dr.Donell Holloway, ECU) in which I'm also participating as a part-funded international Partner Investigator. This builds upon current research with Dr Holloway and Prof. Dr. Lelia Green on another ARC Discovery Project, DP150104734, *Toddlers and tablets: exploring the risks and benefits 0-5s face online*, which has led to co-publications in progress and to collaborative blog posts.

WP2: *Assessment search strategy and coding scheme (intercoder reliability, validation through consulting content experts) and discourse analysis at ECU campus*, including the following activities:
- *Assessment Australian dataset*: screening items; discussion relevance items retained.
- *Round 1 of intercoder reliability* on small sample of Australian data set (n= 20, 23%).
- *Discourse analysis* on the entire Australian dataset (n=87): Gaining qualitative, in-depth rich insights about what is made significant, which practices/activities, identities, relationships, politics, connections (of relevance) are mentioned, and which sign systems/knowledge are being used.
- *Quality assessment*: evaluating relevance of the items and possible data saturation, discussing results round 1 intercoder reliability, refining coding guide.
- *Round 2 of intercoder reliability testing* based on revised coding scheme on a new sample of Australian dataset (n = 20, 23 %). Yielding preliminary findings, detecting patterns in the data.
- *Identification and selection content experts*: Australian content experts were consulted and asked to list the top 5 Australian URLs that they could think of as being popular and/or influential for Australian parents.
- *Development targeted search strategy* for any missing sources.
The findings from WP2 will feed into the COST ACTION IS1410 (DigiLitEY), and the EU Kids Online research, both international research collaboration networks in which my hosts in Australia and I am a partner.

WP3: *Interviews with parents and show and tell with children in the greater Perth region (n=18)*, while adhering to the following procedure:
- *Recruitment:* contacting families (n=9) in the greater Perth region and sending them the recruitment and information letter. Follow-up emails/ phone calls to fix date, timeslot, and location.
- *Introduction:* Welcoming, building rapport, briefing about the goal and procedure of the interview session, explanation informed consent, time for questions and signing the informed consent.
- *Show and tell with child(ren):* Researcher invites the child to show what (s)he likes to play with in the home, encourages the child to show the play activity, to then ask the child what (s)he likes about it.
- *Background Questionnaire*: Participating parent fills out a short background questionnaire
- *Interview with parent*: Interviewer asks interviewee about the child's play practices. Interviewer probes for more information about potential digital play via connected, digital toys, parental beliefs and preferences, as well as parental mediation practices.
- *Closing*: Closing and thank you. Time for questions. Detailed debrief. Providing token of honorarium.

DESCRIPTION OF THE MAIN RESULTS OBTAINED

Expertise gained and exchanged:

WP1: New insights based on the research performed at ECU:
- Posthumanist reflections on connected toys research (collaboration with Dr. Donell Holloway);
- Hard and Soft Data (collaboration with Prof. dr. Lelia Green);
- Practice-based Research (collaboration with dr. Kylie Stevenson);
- Insights on cultural values at a global scale (participation at the Values Impact Forum, e.g. Prof. Shalom Schwartz, Prof. Ariel Knafo-Noam, Prof. Julie Lee).

WP2: A greater and more contextualized understanding of the Australian dataset and the cultural sensitivities that are characteristic to the Australian context of children and digital media (collaboration with Prof. Dr. Lelia Green, Kelly Jaunzems, Dr. Donell Holloway, consulting other Australian domain experts)

WP3: Exchanging expertise, knowledge, and best practices on how to perform ethnographical-inspired research with families with young children (0-8), how to engage young children in qualitative research, how to comply with ethics in a multi-country and multi-institution research (collaboration with Prof. Dr. Lelia Green, Kelly Jaunzems, Dr. Donell Holloway, dr. Kylie Stevenson).

Publications:

WP1:

- <u>Book Chapter, Accepted, Publication date August 2018:</u> Van Mechelen, M., Zaman, B., Bleumers, L., & Mariën, I. (2018). Designing Internet of Toys *for* and *with* Children: A Participatory Design Case Study. In *The Internet of Toys: Practices, Affordances and the Political Economy of Children's Play.* Palgrave Macmillan.
- <u>Full Paper, Accepted, Shortlisted Best Paper Honorable Mention, Publication date June 2018:</u> Zaman, B., Van Mechelen, M., & Bleumers, L. (2018). When Toys Come to Life: Considering the Internet of Toys from an Animistic Design Perspective. *Proceedings of the Interaction Design and Children 2018 Conference (IDC 2018).* ACM: Digital Library.
- <u>Blog post, Planned:</u> Zaman, B., & Holloway, D. (2018). The Internet of Toys: a posthumanist perspective. *DigiLitEY Blog.*

WP2:

- <u>Abstract, Accepted, Presentation May 2018</u>: Zaman, B., Holloway, D., Green, L., Jaunzems, K., Vanwynsberghe, H. (2018). Contrasting narratives of Parental Responsibility and the wellbeing of Children Online: A Critical Discourse Analysis on Belgian and Australian Online Public Advice Given to Parents. ICA 2018 Pre-Conference on Trust, control, and privacy: Mediatisation of childhood and adolescence in the digital age.
- <u>Journal Paper, Accepted to be submitted for consideration in a Special Issue Journal Children and Media (2018),</u> literature review and method section finished, final version due September 2018: Zaman, B., Holloway, D., Green, L., Jaunzems, K., Vanwynsberghe, H. (in progress). Contrasting narratives of Parental Responsibility and the wellbeing of Children Online: A Critical Discourse Analysis of Online Public Advice Given to Parents in Belgium and Australia. Accepted to be submitted for consideration of publication in a Special Issue of the Journal of Children and Media.

WP3:

- <u>Journal paper, planned publication</u>, data analysis ongoing, final version foreseen December 2018 (Leading author: Prof. Bieke Zaman).

<u>FUTURE COLLABORATIONS</u>

- Strategic collaboration with Dr Donell Holloway and Prof Dr. Lelia Green's research group and my research group at KU Leuven in the context of the ARC Discovery project on the Internet of Toys (DP180103922, principal investigator Dr. Donell Holloway start: 2018- end: 2020)
- Continued collaboration with Dr. Donell Holloway in the context of the COST ACTION IS1410 (DigiLitEY).
- Continued interaction with Prof. Dr. Lelia Green around the finalisation of the ARC Discovery project on Toddlers and Tablets (DP150104734), arising in part from collaborative EU Kids Online activities
- Dr. Donell Holloway has been awarded an ARC Discovery International Award to come to my research group in Leuven for a short research stay in 2020. During this short research stay, Dr. Donell Holloway and I will carry out national and international industry interviews, and ensure the comparability of data collection and analysis across research sites. I will also supervise a part-time research associate position in the Mintlab, KU Leuven for several months in 2020 to support design research into connected toys during dr. Donell Holloway's Discovery International Award (DIA).
- Continued collaboration with Prof. Stuart Medley's design research group at ECU.

Approved by

Lelia Green

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(Name and Signature Senior Researcher at Host institution)