

Ensuring Child Safety in Social VR: Navigating Different Perspectives and Merging Viewpoints

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1 INTRODUCTION

The advent of ubiquitous technology has changed the way children grow up and socially interact, with technology becoming an integral part of their daily lives. With VR headsets becoming more affordable and social virtual reality (VR) gaining popularity, an increasing number of children are using these platforms, which are lacking established social norms, regulation and effective and standardised safety-enhancing tools [5]. The level of immersion in social VR has led to new forms of virtual harm, harassment, toxicity and abuse which can be more confronting than in social media, and has created unique challenges for parental oversight, making it difficult to protect children [1, 6, 8]. This leads to the following questions: who holds responsibility for safeguarding children on these platforms; what are the most effective parent-in-the-loop mitigation strategies and safeguarding measures (as agreed by parents, children, educators, experts in child development and more); and would such measures potentially compromise children’s sense of agency and social development?

In this submission and the current PhD research, we explore the different roles and views of the stakeholders and argue that a collaborative effort is necessary to ensure effective safeguarding children in social VR. In particular, we recently found that parents would apply a breadth of safeguarding practices and interventions to protect their children without variation based on the children’s age [3]. Moreover, we measured children’s perceptions (aged 8-16) of an AI-embodied moderator and its actions after the disruptions [4]. The results showed that children felt significantly safer and less sad when the moderator suspended the saboteur. 17 parents noted the usefulness of it and felt reassured but emphasised that they would want to remain involved in the supervision loop. While prior work studied teenagers’ and children’s perspectives about social VR use [9], how children interact with other children and with adults in social VR [8] from observations or via interviews with adults [7], we aim to emphasise the importance of collaboration and navigation of diverse perspectives that may include parents, care givers, experts in child development and the developers to ensure that children can safely and responsibly engage with social VR.

2 COMBATING HARASSMENT AND ABUSE IN SOCIAL VR: DESIGNING SAFETY-ENHANCING TECHNOLOGIES NAVIGATING PARENTAL, EXPERT, AND CHILD PERSPECTIVES

While the perspectives and insight of adult users of social VR on child safety are important, parents are children’s legal guardians charged with protecting children. Therefore, parents are the gatekeepers to acceptance, adoption and customisation of any mitigation tool, as the ultimate end-users, making a strong case that they should be consulted around the development of appropriate safeguarding tools and guidelines. However, their practices and parenting styles may vary depending on a breadth of experiential and situational factors including their cultural and socioeconomic background, their profession, if they are a single parent, if they are away from their children most of the day, if they have an only-child, their parent-child relationship and/or their experiences with social VR [2]. There has been extensive

research about parenting and technology. The concept of parental mediation is considered a new type of parenting that allows parents to shape and influence their children’s media habits [10]. However, parents can face challenges due to their limited knowledge about technology, a desire for greater transparency, or their own attitudes towards technology, which can impact their children’s media use [10, 11]. Two approaches to digital parenting were identified: *expressive empowerment*, which emphasises individual rights and trust, and *respectful connectedness*, which prioritises the family and its goals [2]. Can these be translated into social VR?

While parents have a crucial role to play, therapists may be more objective in their approach to the issue. Unlike parents, therapists are not emotionally invested in the child, and this detachment may allow for a more objective assessment of the potential risks of social VR use. Additionally, therapists trained in child development may have a better understanding of the psychological impact of social VR and proposed interventions on children. Therefore, they may be better equipped to provide advice on the most effective safeguarding practices for children using social VR.

Nevertheless, children are the ones who experience the virtual environment and the problematic events that occur in said environment firsthand, and their feedback and insights can be invaluable. While parents and therapists can provide a certain level of expertise, they may not fully understand the nuances of social VR and the unique challenges it poses for children. Children’s perspectives can offer valuable insight into the types of virtual harm they may encounter and the types of safeguards that would be most effective. Furthermore, involving children in the development of safeguarding measures can empower them and help them feel more in control of their virtual experiences.

3 COLLABORATING FOR SAFE SOCIAL VR: THE NEED FOR STAKEHOLDERS INVOLVEMENT

Collaboration between different perspectives is key to designing safeguarding measures that are effective in preventing harm, are understandable and usable by children, support child agency and preserve valuable opportunities for social development and learning, while balancing the role and involvement of guardians. Both parents and therapists have unique perspectives and roles to play in ensuring children’s safety in social VR, and collaboration between the two may be necessary for the best possible outcome. While therapists may provide a more objective viewpoint, parents and children also have valuable insights and critically are the ones that will determine the acceptance and adoption of any proposed safety measures on how to protect children from harm in virtual environments. However, conflicts between these perspectives may arise and make collaboration challenging for example, parents may reject good ideas from therapists or children may reject good ideas from both for privacy concerns. How can these conflicts be resolved?

Despite this, practical application of research findings is often a challenge. Platforms would have to be willing to incorporate research-based interventions to make social VR a safer place for children. Only through collaborative efforts and a willingness to implement evidence-based practices can lead to the development and implementation of effective safeguarding measures.

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