

# Sustainable Care: Designing Technologies That Support Children’s Long-Term Engagement with Social Issues

JaeWon Kim  
University of Washington  
Seattle, Washington, USA  
jaewonk@uw.edu

Aayushi Dangol\*  
University of Washington  
Seattle, Washington, USA  
adango@uw.edu

Rotem Landesman\*  
University of Washington  
Seattle, Washington, USA  
roteml@uw.edu

Alexis Hiniker  
University of Washington  
Seattle, Washington, USA  
alexisr@uw.edu

McKenna Parnes  
Treuman Katz Center for Pediatric  
Bioethics and Palliative Care  
Seattle Children’s Research Institute  
Seattle, Washington, USA  
mckenna.parnes@seattlechildrens.org

## Abstract

Children today encounter social issues—climate change, conflict, inequality—through digital technologies, and the design of that encounter shapes whether young people move toward lasting civic engagement or toward anxiety and withdrawal. Much of the content children see is optimized for attention through fear and urgency, with few pathways toward meaningful action—contributing to rising distress and disengagement among young people who care deeply but feel powerless to act. This half-day workshop introduces “sustainable care” as a design lens, asking how technology might support children’s sustained engagement with social causes without contributing to empathic distress or burnout. We invite researchers and practitioners across child-computer interaction, games, education, and youth mental health to map this landscape together and develop a research agenda for the CCI community.

## CCS Concepts

• **Human-centered computing** → **Interaction design**.

## Keywords

Children, social issues, sustainability, care, technology design, well-being, civic engagement

### ACM Reference Format:

JaeWon Kim, Aayushi Dangol, Rotem Landesman, Alexis Hiniker, and McKenna Parnes. 2026. Sustainable Care: Designing Technologies That Support Children’s Long-Term Engagement with Social Issues. In *Proceedings of the 25th Interaction Design and Children Conference (IDC ’26)*, June 22–25, 2026, Brighton, United Kingdom. ACM, New York, NY, USA, 3 pages. <https://doi.org/10.1145/3773077.3816192>

\*Both authors contributed equally to this research.



This work is licensed under a Creative Commons Attribution 4.0 International License. *IDC ’26, Brighton, United Kingdom*

© 2026 Copyright held by the owner/author(s).  
ACM ISBN 979-8-4007-2283-7/26/06  
<https://doi.org/10.1145/3773077.3816192>

## 1 Background

Technology shapes how young people encounter social issues—and whether that encounter leads to lasting engagement or to overwhelm. Children today are more aware of global challenges than any previous generation [18, 23], exposed daily to climate change, political conflict, social inequality, and humanitarian crises through social media, news apps, AI companions, and online communities. This awareness can spark political interest, strengthen civic identity, and motivate collective action [1, 8]—but the platforms mediating these encounters prioritize attention capture over constructive engagement, amplifying alarming content [14, 20] with documented consequences for youth mental health [18]: rising anxiety and depression [6, 15], existential distress rooted in feeling betrayed by protective institutions [7, 17], and a growing sense of powerlessness [3, 19]. Marks et al.’s ten-country survey found 59% of young people very or extremely worried about climate change, with 45% reporting that this distress affects their daily functioning [17]. This generation’s awareness, in other words, produces distress rather than agency—a collapse of the conditions for sustained engagement.

This workshop introduces “sustainable care” as a lens for understanding and addressing this challenge. Sustainable care refers to ways of engaging with social causes that children can maintain over time without experiencing burnout or emotional exhaustion. The term carries a dual meaning: it encompasses both children’s care toward societal issues and our care toward children as designers, educators, and researchers. These two dimensions are inseparable. Many young people respond to the issues they encounter online through civic engagement—organizing around causes they care about, raising awareness among peers, and participating in collective action both online and offline [2, 24]. Supporting their well-being and supporting that engagement are not competing goals but complementary ones.

This workshop proposes four themes for sustainable care, derived from the US Surgeon General’s advisory on protecting youth mental health [18]. The advisory’s eight recommendations for young people map onto four broader themes that structure our workshop discussion.

- (1) **Bounded responsibility**: understanding one’s role as part of a collective effort rather than carrying the weight of global

**Table 1: This half-day, hybrid workshop brings together CCI researchers, game designers, mental health practitioners, civic technology developers, and educators to examine how technology can support sustainable care for young people engaging with social issues. (Workshop Website: <https://sustainable-care-idc.github.io/>)**

Time	Activity	Description
09:00–09:10	Welcome & Overview	Agenda, goals, and introductions to the day
09:10–09:30	Participant Introductions	Name, context, and what you hope to take away
09:30–09:40	Framing Sustainable Care	Introduction to the workshop theme and four themes
09:40–10:00	Individual Reflection	Recall a moment of “unsustainable care”—firsthand or observed—then share in small groups
10:00–10:45	<b>Roundtable 1:</b> By Topic Area	Grouped by thematic interest to identify patterns of unsustainable care and the role of children
10:45–11:00	Report-Back	Each group shares key takeaways
11:00–11:20	<i>Break</i>	
11:20–12:05	<b>Roundtable 2:</b> By Technology	Grouped by technology of interest to examine how specific tools mediate unsustainable care
12:05–12:15	Report-Back	Each group shares key takeaways
12:15–12:55	<b>Roundtable 3:</b> Action Planning	Return to Roundtable 1 groups; synthesize insights from both rounds and develop concrete action plans through the four themes of sustainable care
12:55–13:10	Report-Back	Each group shares action plans
13:10–13:30	Closing	Feedback, next steps, and follow-up process

problems alone. This theme draws on the advisory’s recommendations to “be intentional about your use of social media, video games, and other technologies” and to “take care of your body and mind.”

- (2) **Actionable pathways:** having concrete, age-appropriate ways to contribute that connect awareness to meaningful action. This theme draws on “find ways to serve” and “be a source of support for others.”
- (3) **Resilience through community:** developing capacities to persist through setbacks and uncertainty without losing hope or motivation. This theme draws on “ask for help” and “invest in healthy relationships.”
- (4) **Mental health orientation:** recognizing mental health both as a precondition for and a desired outcome of sustainable care. This theme draws on “remember that mental health challenges are real, common, and treatable” and “learn and practice techniques to manage stress and other difficult emotions.”

These components are not a rigid framework but rather a starting point for discussion—a vocabulary for asking what sustainable care might look like in practice.

For the child-computer interaction community, this framing opens important design questions. Technologies can exacerbate the awareness-agency mismatch through fear-based content, algorithmic amplification of distress, and passive consumption patterns [5, 9, 10, 16, 22]. But technologies can also support sustainable care—through games that model civic engagement, tools that connect children to communities of practice, or platforms that make pathways visible and achievable [4, 11–13, 21]. The question is not whether children should encounter difficult realities but how technology might mediate that encounter in ways that sustain rather than deplete their capacity to care.

Table 1 outlines the half-day workshop structure. A pre-workshop survey collects each participant’s technology and topic interests to pre-assign groups for the design activities. The session moves from individual reflection to shared vocabulary building, then through

three structured roundtables—organized first by thematic interest, then by technology, and finally returning to thematic groups to map insights onto the four themes of sustainable care and develop concrete action plans (e.g., research collaborations, strategies for embedding sustainable care in ongoing work, draft guidelines). Following the workshop, we will share outputs that participants collectively agree to make public and follow up to support the plans developed during the session.

## 2 Organizers

**JaeWon Kim** is a PhD candidate at the University of Washington Information School. Her research focuses on understanding, designing, and building social technologies that center on meaningful social connections, especially for youth.

**Aayushi Dangol** is a PhD candidate at the University of Washington. Her research investigates how to responsibly deploy AI in ways that support children’s learning, development, and interaction.

**Rotem Landesman** is a PhD candidate at the University of Washington Information School. Her research focuses on supporting youth’s critical and ethical thinking about emerging technologies.

**Alexis Hiniker** is an Associate Professor at the University of Washington Information School. She studies how attention-economy design exploits users of all ages—but particularly children, teens, and families—and she designs more respectful alternatives to help people thrive.

**McKenna Parnes** is an Assistant Professor in the Department of Pediatrics at the University of Washington School of Medicine and an Investigator in the Treuman Katz Center for Pediatric Bioethics and Palliative Care at Seattle Children’s Research Institute. She studies how socio-ecological factors play critical roles in youth risk, resilience, and opportunities, and she evaluates the implementation and effectiveness of resilience-building interventions.

### 3 Call for Participation

We invite researchers, designers, and practitioners to join a half-day workshop on *sustainable care*—supporting children's lasting engagement with social causes through technology design. We welcome position papers (2–4 pages, ACM SIGCHI format) addressing empirical findings on how children encounter social issues through technology; design cases of technologies that support or undermine sustained engagement; perspectives from games, education, mental health, or civic technology; and encore submissions of previously published work with a short statement on relevance to sustainable care. Submissions will be reviewed for relevance and diversity of disciplinary background. Submissions should not be anonymized, and at least one author of each accepted paper must attend the workshop, and all participants must register for the workshop.

### Acknowledgments

JaeWon Kim would like to acknowledge the CERES Network, University of Washington Global Innovation Funds (GIF), and Student Technology Funds (STF), which provided support for this work. This work was also funded in part by the Paul G. Allen School of Computer Science & Engineering Endowed Fund for Excellence and a gift from Google. Alexis Hiniker is a special government employee for the Federal Trade Commission. The content expressed in this manuscript does not reflect the views of the Commission or any of the Commissioners.

### References

- [1] Shelley Boulianne. 2015. Social Media Use and Participation: A Meta-analysis of Current Research. *Information, Communication & Society* 18, 5 (2015), 524–538. doi:10.1080/1369118X.2015.1008542
- [2] Shelley Boulianne and Yannis Theocharis. 2020. Young People, Digital Media, and Engagement: A Meta-Analysis of Research. *Social Science Computer Review* 38, 2 (2020), 111–127. doi:10.1177/0894439318814190
- [3] Susan Clayton. 2020. Climate Anxiety: Psychological Responses to Climate Change. *Journal of Anxiety Disorders* 74 (2020), 102263. doi:10.1016/j.janxdis.2020.102263
- [4] Aayushi Dangol, Robert Wolfe, Akeiyah Dewitt, Ben Chickadel, Julie Kientz, and Sayamindu Dasgupta. 2025. Reading AI and reading the world: Using an interactive AI system to promote Children's understanding of AI bias. *ACM Transactions on Computer-Human Interaction* 32, 6 (2025), 1–30.
- [5] Aayushi Dangol, Robert Wolfe, Daeun Yoo, Arya Thiruvillakkat, Ben Chickadel, and Julie A. Kientz. 2025. If anybody finds out you are in BIG TROUBLE": Understanding Children's Hopes, Fears, and Evaluations of Generative AI. In *Proceedings of the 24th Interaction Design and Children (IDC '25)*. Association for Computing Machinery, New York, NY, USA, 872–877. doi:10.1145/3713043.3731498
- [6] Katie Davis, Rotem Landesman, Jina Yoon, JaeWon Kim, Daniela E Munoz Lopez, Lucia Magis-Weinberg, and Alexis Hiniker. 2025. "You Go Through So Many Emotions Scrolling Through Instagram": How Teens Use Instagram To Regulate Their Emotions. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI '25)*. Association for Computing Machinery, New York, NY, USA, Article 1179, 16 pages. doi:10.1145/3706598.3713844
- [7] Caroline Hickman, Elizabeth Marks, Panu Pihkala, Susan Clayton, R. Eric Lewandowski, Elouise E. Mayall, Britt Wray, Catriona Mellor, and Lise van Susteren. 2021. Climate Anxiety in Children and Young People and Their Beliefs about Government Responses to Climate Change: A Global Survey. *The Lancet Planetary Health* 5, 12 (2021), e863–e873. doi:10.1016/S2542-5196(21)00278-3
- [8] Joseph Kahne, Nam-Jin Lee, and Jessica T. Feezell. 2013. The Civic and Political Significance of Online Participatory Cultures among Youth Transitioning to Adulthood. *Journal of Information Technology & Politics* 10, 1 (2013), 1–20. doi:10.1080/19331681.2012.701109
- [9] JaeWon Kim, Hyunsung Cho, Fannie Liu, and Alexis Hiniker. 2026. Social Media Should Feel Like Minecraft, Not Instagram: Youth Visions for Meaningful Social Connections through Fictional Inquiry. arXiv:2502.06696 [cs.HC] <https://arxiv.org/abs/2502.06696>
- [10] JaeWon Kim, Soobin Cho, Robert Wolfe, Jishnu Hari Nair, and Alexis Hiniker. 2025. Privacy as Social Norm: Systematically Reducing Dysfunctional Privacy Concerns on Social Media. *Proc. ACM Hum.-Comput. Interact.* 9, 2, Article CSCW151 (May 2025), 39 pages. doi:10.1145/3711049
- [11] JaeWon Kim, Jiaying Liu, Lindsay Popowski, Cassidy Pyle, Ahmer Arif, Gillian R. Hayes, Alexis Hiniker, Wendy Ju, Florian Floyd Mueller, Hua Shen, Sowmya Somanath, Casey Fiesler, and Yasmine Kotturi. 2025. Design for Hope: Cultivating Deliberate Hope in the Face of Complex Societal Challenges. In *Companion Publication of the 2025 Conference on Computer-Supported Cooperative Work and Social Computing (CSCW Companion '25)*. Association for Computing Machinery, New York, NY, USA, 112–115. doi:10.1145/3715070.3748287
- [12] JaeWon Kim, Lindsay Popowski, Anna Fang, Cassidy Pyle, Guo Freeman, Ryan M. Kelly, Angela Y. Lee, Fannie Liu, Angela D. R. Smith, Alexandra To, and Amy X. Zhang. 2024. Envisioning New Futures of Positive Social Technology: Beyond Paradigms of Fixing, Protecting, and Preventing. In *Companion Publication of the 2024 Conference on Computer-Supported Cooperative Work and Social Computing (San Jose, Costa Rica) (CSCW Companion '24)*. Association for Computing Machinery, New York, NY, USA, 701–704. doi:10.1145/3678884.3681833
- [13] Rotem Landesman, Jenny Radesky, and Alexis Hiniker. 2023. Let Kids Wonder, Question and Make Mistakes: How the Designers of Children's Technology Think about Child Well-being. In *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (Chicago, IL, USA) (IDC '23)*. Association for Computing Machinery, New York, NY, USA, 310–321. doi:10.1145/3585088.3589371
- [14] Rotem Landesman, Jina Yoon, JaeWon Kim, Daniela E Munoz Lopez, Lucia Magis-Weinberg, Alexis Hiniker, and Katie Davis. 2024. "I Just Don't Care Enough To Be Interested": Teens' Moment-By-Moment Experiences on Instagram. In *Proceedings of the 23rd Annual ACM Interaction Design and Children Conference (Delft, Netherlands) (IDC '24)*. Association for Computing Machinery, New York, NY, USA, 14–29. doi:10.1145/3628516.3655812
- [15] Rose E. Lewandowski, Susan D. Clayton, Lena Olbrich, Joseph W. Sakshaug, Britt Wray, Sarah E. O. Schwartz, Jura Augustinavicius, Peter D. Howe, McKenna Parnes, Sabrina Wright, Chelsea Carpenter, Arkadiusz Wisniowski, David Perez Ruiz, and Lise Van Susteren. 2024. Climate emotions, thoughts, and plans among US adolescents and young adults: a cross-sectional descriptive survey and analysis by political party identification and self-reported exposure to severe weather events. *The Lancet Planetary Health* 8, 11 (2024), e879–e893. doi:10.1016/S2542-5196(24)00229-8
- [16] Kai Lukoff, Cissy Yu, Julie A. Kientz, and Alexis Hiniker. 2018. What Makes Smartphone Use Meaningful or Meaningless? *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies* 2, 1 (2018), 1–26. doi:10.1145/3191754
- [17] Elizabeth Marks, Caroline Hickman, Panu Pihkala, Susan Clayton, R. Eric Lewandowski, Elouise E. Mayall, Britt Wray, Catriona Mellor, and Lise van Susteren. 2021. Young People's Voices on Climate Anxiety, Government Betrayal and Moral Injury: A Global Phenomenon. *The Lancet Planetary Health* 5, 12 (2021), e863–e873. doi:10.1016/S2542-5196(21)00278-3
- [18] Office of the Surgeon General. 2021. *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*. Technical Report. U.S. Department of Health and Human Services, Washington, DC.
- [19] Maria Ojala. 2012. Hope and Climate Change: The Importance of Hope for Environmental Engagement among Young People. *Environmental Education Research* 18, 5 (2012), 625–642. doi:10.1080/13504622.2011.637157
- [20] McKenna F. Parnes, Brendan Amort, Cayetana Calderon-Smith, Earle C. Chambers, and Regina Musicaro. 2024. Child and Adolescent Engagement with Climate Change on Social Media and Impacts on Mental Health: A Narrative Review. *Current Psychiatry Reports* 26, 11 (2024), 654–665. doi:10.1007/s11920-024-01537-y
- [21] McKenna F. Parnes and Elliott M. Weiss. 2025. Digital Mental Health Innovations in the Face of Climate Change: Navigating a Sustainable Future. *Psychiatric Services* (2025). doi:10.1176/appi.ps.20240327
- [22] Jenny Radesky and Alexis Hiniker. 2022. From Moral Panic to Systemic Change: Making Child-Centered Design the Default. *International Journal of Child-Computer Interaction* 31 (2022), 100351. doi:10.1016/j.ijcci.2021.100351
- [23] Victoria Rideout and Michael B. Robb. 2019. *The Common Sense Census: Media Use by Tweens and Teens, 2019*. Technical Report. Common Sense Media, San Francisco, CA.
- [24] Sarah E. O. Schwartz, Laelia Benoit, Susan Clayton, McKenna F. Parnes, Lance Swenson, and Sarah R. Lowe. 2023. Climate change anxiety and mental health: Environmental activism as buffer. *Current Psychology* 42 (2023), 16708–16721. doi:10.1007/s12144-022-02735-6