Youth and the Digital Society

Piotrowski, J.T.

DOI
10.2307/jj.11895525.8
10.1515/9789048560608-006

Publication date
2024

Document Version
Final published version

Published in
Communication Research into the Digital Society

5. Youth and the Digital Society

Jessica Taylor Piotrowski

Abstract
The digital transformation has impacted all aspects of society. These impacts are most acutely seen amongst the youngest generation as they have been born into a world that looks entirely different than generations before. For researchers interested in how youth navigate, accommodate, and shape the digital society, these changes have precipitated a need for revised theorising; more precise analytic approaches; and a recognition that many young people lack the skills necessary to fully participate in this digital society. ASCoR scholars have contributed meaningfully to a global dialogue about how we can ensure that youth are prepared for the digital world they live in and remain committed to this dynamic dialogue in the years ahead.

Keywords: adolescence, children, differential susceptibility, technological access, digital competence

Introduction

After the introduction of television, E. B. White famously said that television was "going to be the test of the modern world. We shall stand or fall by the television—of that I am quite sure" (White, 1950). Fast forward to 2023—and replace television with digitisation. Every aspect of our mediated world is, or can be, digital. Access is at one's fingertips, information should be bite-sized, experiences should be interactive, narrative should be transportive, and communication can be through and with human and non-human agents. The digital transformation has impacted all aspects of society. These impacts are perhaps most acutely seen amongst the youngest generation as they have been born into a world that looks entirely different than generations

Piotrowski, J. T. (2024). Youth and the digital society. In T. Araujo & P. Neijens (Eds.), *Communication research into the digital society: Fundamental insights from the Amsterdam School of Communication Research* (pp. 87-100). Amsterdam University Press. https://doi.org/10.5117/9789048560592_ch05

before. Communication scholars have always identified this group as a special one for study, but digital transformations have placed this group in a space of urgency—with society demanding answers regarding the impact of social media on youth; the extent to which (emerging) technology such as smartphones, wearables, streaming services, virtual assistants, social robots, and artificial intelligence might reshape childhood; the ethical ramifications of the digital society (see Livingstone & Third, 2017), including the right to participation and representation, the right to (data) protection and online safety, the right to digital competence, and the right to be forgotten; and the skills necessary to thrive in this new digital space.

In the past decade, youth and media scholars at ASCoR have worked to respond to these changing times and these pressing issues. Given that the digital society has impacted many different echelons of youth and media scholarship, there is not one theoretical, methodological, or conceptual development that can be highlighted as pinnacle. Rather, there are a handful of interconnected developments that together have shaped—and continue to shape—how ASCoR researchers approach and contribute to the dynamic topic of youth and media in the digital society.

Theoretical contributions

Perhaps most impactful to the youth and media field has been Valkenburg and Peter's (2013) theoretical publication "The Differential Susceptibility to Media Effects Model." After only a decade this publication has already been cited nearly a thousand times and is recognised by scholars globally as game-changing—both for communication science and for youth and media scholars specifically. In this manuscript, Valkenburg and Peter argue for attention to differential susceptibility—namely, a recognition that not all media effect all users in the same manner. To that end, they offer a theoretical model, DSMM, which posits that individual differences in developmental, dispositional, and social susceptibility impact media selection and media processing—leading to differential effects.

For certainty, even before the digital transformation, the communication science field saw us theorising about differential effects to some extent. But Valkenburg and Peter's model, whose development not coincidently occurred as digital technology was fiercely grabbing hold of the youth media landscape, has pushed scholars to rethink existing practices. In the analogue media era, most (youth and media) scholars relied on statistical controls to draw conclusions for all (Piotrowski & Valkenburg, 2015). As a

result, differential susceptibility was often excluded entirely from analytic considerations, and instead the tradition leaned towards either saying, "Yes, effect for all" or "No, no effect for all." But the digital transformations in the field—moving, for example, from analogue television, books, and radio to social media, games, interactive television, social robots, virtual assistants, and (personal) smart devices—made it clear that the field needed to consider "Yes, for some" as a plausible (and likely) outcome.

Consider social media, such as TikTok or YouTube, for a moment. The uptick of social media use among youth (who are among the earliest adopters and most frequent users of social media across all age groups) has been a field-changer for youth and media scholars. Youth today choose amongst an array of social media spaces where they then co-construct a unique experience that is all their own. Both TikTok and YouTube offer a video viewing experience, both offer opportunities for short form video content, and both offer opportunities for social comments. Yet, they offer a very different experience when compared to each other. Even more, within TikTok or YouTube, teens will have a very different experience depending upon the choices they make. Inasmuch, simply offering a "Yes" or a "No" as to whether social media impacts young people is illogical. We need to understand which youth choose which social media, how they use this social media, what responses they experience when using this social media, and what effects occur thereafter.

The DSMM is the first comprehensive theory to provide theoretical space for these questions, and ASCoR scholars gave the DSMM its first voice via a pair of studies. First, in a longitudinal study with adolescents, ASCoR scholars were interested in nuancing the debate regarding (digital and analogue) media violence and aggressive behaviour. Rather than "Yes" or "No," they found "Yes, for some." Specifically, they demonstrated that children growing up in families with higher conflict are more susceptible to the impact of media violence as these teens experience greater arousal when consuming violent media content and, as a result, demonstrate increased aggressive tendencies (Fikkers, 2016; Fikkers et al., 2013; Fikkers et al., 2016). Similarly, in a parallel longitudinal study with younger children, ASCoR researchers asked about the relationship between ADHD behaviour and violent/scary media. Here, too, a "Yes, for some" relationship was found. Boys with increased ADHD behaviour were found to consume more violent/scary media and demonstrated differences in arousal and attention to violent/scary media. Moreover, the use of autonomy-supportive parenting was associated with fewer ADHD behaviours and less violent/scary media consumption, and lastly, ADHD behaviours longitudinally predicted violent/scary media

content consumption which then increased ADHD behaviours (Nikkelen et al., 2014; Nikkelen et al., 2015).

These two case studies were foundational examples of the utility of the DSMM in the digital society. And, since that time, the use of the model across the field has exploded—paralleling the explosion of the use of digital media throughout childhood and adolescence. ASCoR scholars have been at the forefront of this explosion—asking precisely when, for whom, and how the digital society impacts young people. This work has touched upon multitasking, virtual assistants, sexual internet content, and more. For example, Baumgartner and colleagues found longitudinal evidence for a potential detrimental long-term effect of media multitasking on attention problems for early adolescents (Baumgartner et al., 2017; see also van der Schuur et al., 2015). Van Oosten (2016) demonstrated that the link between sexually explicit internet use and sexual uncertainty was only present among girls with low hyper-gendered orientation and a high impersonal sex orientation. Wald and colleagues (Wald, Piotrowski, van Oosten, et al., 2023) found that differences in technology confidence, internet literacy, and preferred style of media mediation best characterise whether families have (34%) smart speakers in their homes. And Meier et al. (2022) showed that while more automatic social media use and more frequent phone checking predicted procrastination for teens, this occurred only in a minority of adolescents.

Methodological contributions

Just as the theorising has shifted to encourage more nuanced answers about today's digital society, this theorising—combined with a quickly changing media landscape—has necessitated a shift in methods as well. The digital society affords (and often assumes) that the user is an active contributor in the experience—engaging via and with technology. Children and teens engage with digital games (Lemmens et al., 2015); they text with friends (Valkenburg & Peter, 2009); they post images on Instagram and comments on YouTube (de Vries et al., 2018; Möller et al., 2021); they play with apps (Broekman et al., 2018); they talk to virtual assistants (Wald, Piotrowski, Araujo, et al., 2023); they high-five robots (Peter & Kühne, 2018); and they are surrounded by others using digital media throughout their everyday lives (Wolfers et al., 2020). Youth are among the first adopters of changing technologies, and these technologies have left us asking: What are the differential impacts? and How do we measure the impact? In a space

where simply posting a status update can impact one's own sense of self (Valkenburg, 2017), the digital society has required scholars to reconsider our measurement and analytic approaches.

In this book, Trilling and colleagues (2024) highlight the so-called computational turn at ASCoR—demonstrating how the digital society has pushed ASCoR scholars to leverage computational methodology to answer key questions of our time. This computational turn has also been felt in the youth and media sector, with scholars relying on computational methodology (via public data scraping and personal data donation) to assess large corpuses of (media) content. For example, computational approaches have been used to assess the types of sexual information that adolescents locate online; total amount of smartphone use (Baumgartner et al., 2023); and the types of behaviours engaged in during social media usage (van Driel et al., 2022). These approaches have been a valuable addition in an age of big data, handheld devices, and personalised experiences. They help us understand aspects of the so-called black box (Fikkers & Piotrowski, 2020)—namely, what individuals are consuming as well as where and how they are responding to this information (see also Araujo et al., 2022). Yet, while these computational methods provide us the opportunity to gather more precise insight into the media experience, they do not by default capitalise on this precision—leaving incomplete answers to key questions in the field.

Specifically, the media effects field—within and outside youth and media—has long suffered with a mismatch between theorising and analysis. Theoretically, the media effects tradition acknowledges that media effects occur within a person and that the type of effects depend upon the interaction between person, content, and context characteristics (i.e., DSMM predictions). Yet historically, analyses have primarily looked for differences between persons. Indeed, a look across the youth and media space (e.g., Valkenburg & Piotrowski, 2017) shows that the great majority of (quantitative) studies have either compared one group with another group via (quasi-)experiments or relied on a single (occasionally ±3 data points) for a single participant in survey/longitudinal research. With such relatively limited datasets, it was only possible to statistically compare—and make conclusions—between people. And for the most part, this was sufficient, particularly with analogue media where the content was largely known, limited in scope, and interactivity was non-existent.

The digital society, however, brings with it nearly limitless media experiences that are often precipitated upon the types of interactivities involved. The increased accessibility of computational methods and

in-depth measurement (e.g., experience sampling) (see Siebers et al., 2022; Verbeij et al., 2022) offers researchers the statistical and computational power to zoom into an individual participant's data and actually uncover within-person relationships between predictors and outcomes. Meier's work, for example, capitalised on 22,809 assessments from 312 adolescents (Meier et al., 2022). With such data, it is increasingly possible to study the very relationships that scientists have been theorising about all along; enabling scholars to augment existing work by looking within (many) persons and, in doing so, obtaining richer detail about for whom these relationships exist or not.

ASCoR scholars have responded to this opportunity by encouraging the youth and media field to consider the use of person-specific approaches (Valkenburg et al., 2021) to precisely understand what the relationship between youth and the digital society is, and how the digital society is (re) shaping childhood and adolescence. For example, ASCoR scholars in Project AWeSome implemented a person-specific analytic paradigm to test how each young person is impacted. Rather than concluding a null relationship, which would have been the case with former approaches, they found that the majority of adolescents (88%) experience little to no effect of social media use on self-esteem but 4% experienced positive effects and 8% experienced negative effects (Valkenburg et al., 2021). At a societal level, this is a meaningful distinction. And, indeed, similar patterns have been echoed with analyses on well-being with 45% of adolescents experiencing no changes in well-being due to social media use, 28% experiencing declines in well-being, and 26% experiencing increases in well-being (Beyens et al., 2021). This work, and others like it from ASCoR scholars, has helped shift the dialogue about effects in the digital society from "Is there an effect?" to "For whom is there which effect?"—making a strong argument for including more advanced person-specific approaches in digital society scholarship.

Conceptual developments

While theorising and methodological approaches have evolved alongside changes in the digital society, so have the conversations about what it means for youth to thrive in the digital society. Here, too, ASCoR scholars have been actively engaging in scholarship to understand the protective and empowering factors that may be unique to this space. One topic that has entered the lexicon of many ASCoR scholars is digital competence—namely,

the digital knowledge and digital skills needed (for youth) to thrive in the digital environment.

Note that the phrase "for youth" is indicated parenthetically as the concept is truly a lifespan concept. The digital society is a powerfully beneficial force for some individuals in some contexts. But these benefits are neither uniform nor equitable. There are groups who remain excluded or marginalised because of a lack of access to technology transformations. And, even within a prosperous country such as the Netherlands, data collected in ASCoR's Digital Competence (DIGCOM) Project shows that technology access is not equal (e.g., de Vries et al., 2022b). At the same time, nearly half of the European population lacks the knowledge and skills necessary to thrive in the digital world (Clifford et al., 2020; European Union, n.d.). Without the right skills, the opportunities of the digital society are unlikely to be experienced. Instead, the pitfalls—privacy and security leaks; mental health and well-being degradation; digital addiction, and more—risk becoming the hallmark of the digital society.

This is an urgent problem, which will only be exacerbated as artificial intelligence advances at rapid speed. Solving the problem requires intervention at numerous societal levels, with youth considered a critical point of impact. In the Netherlands, for example, there is a robust dialogue about the degree to which digital competence should be a required learning outcome in early education. But enacting such a policy means understanding precisely what digital competence is, and what knowledge and capacities youth do (and do not) have. Only then is it possible to investigate digital diversity: namely, who requires support, what type of support is needed, and how best to offer it (de Vries et al., 2023).

As first step, ASCoR researchers have contributed to this dialogue by creating the DigIQ® —a psychometrically valid assessment tool to assess digital competence that covers the full dimension of digital competence (strategic information; critical information; netiquette; digital content creation; safety and control of information and devices; digital health and well-being; sustainable/green technology; artificial intelligence), captures variability, and facilitates comparisons across age (de Vries et al., 2022a). Even more, this tool provides connections to local resources to help individuals bolster their skills and is now part of a national dialogue about ways to monitor and support digital competence. By formalising and elevating the concept of digital competence to the (inter)national agenda, ASCoR researchers have offered a critical foundation for future dialogue on thriving in the digital society.

Next steps

At ASCoR, this foundational conversation of digital competence is already being complemented by research on growing up in a digital society. From asking how and whether children form relationships with social robots (de Jong et al., 2019; Peter et al., 2019; Peter & Kühne, 2018; van Straten et al., 2022), to asking about their interaction and accommodation of virtual assistants (Wald, Piotrowski, Araujo, et al., 2023), to questions about youth multitasking online (Baumgartner et al., 2017), to studying the degree to which digital spaces support healthy solitude (Keessen et al., 2022)—ASCoR researchers continue to make clear that young people are confronted with a world that their (grand)parents never experienced.

It will take all of us—including the developers of this digital space (as argued by Dekker et al., 2023)—to ensure the road ahead does more good than harm. This means pushing for a responsible tech agenda, including ethics by design (e.g., Helberger et al., 2018; Palomar-Garcia et al., 2023; Slater et al., 2020). Too long have developers taken an agnostic approach to the effects of their technology—advancing the position that they are not responsible for how their technology is used. Yet, they are also responsible. They are in possession of a wealth of data that informs them about how users respond to their content—including how "like" features, stopping cues, editing features, time indicators, data privacy tools, and more influence the experience and safety of users. Developers can use this data to improve the media ecosystem, and in doing so, benefit all of us. It is a choice to allow algorithmic recommendations to reflect and reinforce inequalities in our social system (Helberger et al., 2018). It is a choice to prioritise and push persuasive influencer content to teens (van Reijmersdal & van Dam, 2020). It is a choice to create platforms that are addictive (Lemmens & Hendriks, 2016). The future involves holding developers accountable, too. Developers, researchers, policymakers, and youth themselves—all need to sit at the same table. ASCoR researchers are ready to play their part. Just recently, for example, Sindy Sumter, Chei Billedo, and Irene van Driel launched SeeMeBeMe—an initiative in which ASCoR researchers are engaging with youth, developers, and policymakers to share research insights on how youth experience media to better ensure that "future media products … support ALL young people in today's digital, hyperdiverse society" (SeeMeBeMe, 2023).

At the same time, the future also involves concretely operationalising the in vogue term "digital well-being." At the time of this writing, it functions as an omnibus term for any positive integration of technology into one's

life—and, in that regard, there is real opportunity to refine and nuance this concept. A cursory review of the literature suggests that digital well-being refers to the state of one's physical, mental, and emotional health in relation to one's use of technology and digital devices (e.g., Burr et al., 2020; Orben & Przybylski, 2019; Vanden Abeele, 2021). It is said to involve finding a balance between the benefits and risks associated with digital technology and is often connected to practices such as setting boundaries for screen time, taking technology breaks, using technology in a responsible way, and developing healthy habits around technology use. While on its face this is an interesting concept, there is much to be gained in specifying this concept and its sub-concepts—both for measurement and intervention.

Lastly, and perhaps most difficult, the future requires changing the field's current reactive stance to a proactive one whereby scholarship asks how we can ensure that youth are prepared for the next digital development. Historically, communication science has demonstrated that—with each new technology—society first experiences fear and panic, with the so-called few "innovators" excitedly trying the technology (Livingstone, 2002). This is often followed by resistance and scepticism, as people question the value added. With time, integration often occurs—and then discussions about limits and boundaries emerge. But as history has shown, particularly as it relates to ethics and privacy, these discussions are often too late. These discussions need to be at the forefront so that the process of technological accommodation keeps humans in the loop throughout the process, not only after.

References

Araujo, T., Ausloos, J., van Atteveldt, W., Loecherbach, F., Moeller, J., Ohme, J., Trilling, D., van de Velde, B., de Vreese, C., & Welbers, K. (2022). OSD2F: An open-source data donation framework. *Computational Communication Research*, *4*(2), 372–387. https://doi.org/10.5117/CCR2022.2.001.ARAU

Baumgartner, S. E., Sumter, S. R., Petkevič, V., & Wiradhany, W. (2023). A novel iOS data donation approach: Automatic processing, compliance, and reactivity in a longitudinal study. *Social Science Computer Review*, *41*(4), 1456–1472. https://doi.org/10.1177/08944393211071068

Baumgartner, S. E., van der Schuur, W. A., Lemmens, J. S., & te Poel, F. (2017). The relationship between media multitasking and attention problems in adolescents: Results of two longitudinal studies. *Human Communication Research*, *44*(1), 3–30. https://doi.org/10/gfw9jg

Beyens, I., Pouwels, J. L., van Driel, I. I., Keijsers, L., & Valkenburg, P. M. (2021). Social media use and adolescents' well-being: Developing a typology of person-specific effect patterns. *Communication Research*. Advance online publication. https://doi.org/10.1177/00936502211038196

Broekman, F. L., Piotrowski, J. T., Beentjes, H. W., & Valkenburg, P. M. (2018). App features that fulfill parents' needs in apps for children. *Mobile Media & Communication*, *6*(3), 367–389. https://doi.org/10.1177/2050157918759571

Burr, C., Taddeo, M., & Floridi, L. (2020). The ethics of digital well-being: A thematic review. *Science and Engineering Ethics*, *26*(4), 2313–2343. https://doi.org/10.1007/s11948-020-00175-8

Clifford, I., Kluzer, S., Troia, S., Jakobsome, S., & Zandbergs, U. (2020). *DigCompSat: A self-reflection tool for the European digital framework for citizens*. Publications Office of the European Union. https://doi.org/10.2760/77437

de Jong, C., Kühne, R., Peter, J., van Straten, C. L., & Barco, A. (2019). What do children want from a social robot? Toward gratifications measures for child–robot interaction. *Proceedings of the 2019 28th IEEE International Conference on Robot and Human Interactive Communication* (*RO-MAN*)*, India*, 1–8. https://doi.org/10.1109/RO-MAN46459.2019.8956319

Dekker, C., A., Baumgartner, S. E., Sumter, S. R., & Ohme, J. (2023, September 20–23). *Improving digital well-being: Findings from two intervention studies targeting smartphone behavior* [Poster session]. 2023 Digital Media and Developing Minds International Scientific Congress, Washington, DC.

de Vries, D. A., Möller, A. M., Wieringa, M. S., Eigenraam, A. W., & Hamelink, K. (2018). Social comparison as the thief of joy: Emotional consequences of viewing strangers' Instagram posts. *Media Psychology*, *21*(2), 222–245. https://doi.org/10.1080/15213269.2016.1267647

de Vries, D. A., Piotrowski, J. T., & de Vreese, C. (2022a, December 8). *DigIQ*. OSF. https://osf.io/dfvqb

de Vries, D. A., Piotrowski, J. T., & de Vreese, C. (2022b). *Resultaten onderzoek digitale competenties* (*DIGCOM*). University of Amsterdam. https://osf.io/7sn6q/

de Vries, D. A., Piotrowski, J. T., & de Vreese, C. (2023). *Developing DigIQ: A measure of digital competence* [Manuscript in preparation]. Amsterdam School of Communication Research, University of Amsterdam.

European Union. (n.d.). *Digital competence framework for educators* (*DigCompEdu*). https://ec.europa.eu/jrc/en/digcompedu

Fikkers, K. M. (2016). *A different*(*ial*) *perspective: How social context influences the media violence–aggression relationship among early adolescents* (Publication no. 9789462039681) [Doctoral dissertation, University of Amsterdam]. UvA-DARE. https://hdl.handle.net/11245/1.512223

Fikkers, K. M., & Piotrowski, J. T. (2020). Content and person effects in media research: Studying differences in cognitive, emotional, and arousal responses to media content. *Media Psychology*, *23*(4), 493–520. https://doi.org/10/ggkz53

Fikkers, K. M., Piotrowski, J. T., & Valkenburg, P. M. (2016). Beyond the lab: Investigating early adolescents' cognitive, emotional, and arousal responses to violent games. *Computers in Human Behavior*, *60*, 542–549. https://doi.org/10.1016/j.chb.2016.02.055

Fikkers, K. M., Piotrowski, J. T., Weeda, W. D., Vossen, H. G. M., & Valkenburg, P. M. (2013). Double dose: High family conflict enhances the effect of media violence exposure on adolescents' aggression. *Societies*, *3*(3), 280–292. https://doi.org/10/gcftnk

Helberger, N., Karppinen, K., & D'Acunto, L. (2018). Exposure diversity as a design principle for recommender systems. *Information, Communication & Society*, *21*(2), 191–207. https://doi.org/10/gfkn39

Keessen, L., Piotrowski, J. T., Sumter, S. R., & van Oosten, J. M. F. (2022, June 19–23). Me-time in the digital age: Development and validation of the need for solitude scale [Paper presentation]. 26th Biennial Meeting of the International Society for the Study of Behavioural Development, Rhodes, Greece.

Lemmens, J. S., & Hendriks, S. J. F. (2016). Addictive online games: Examining the relationship between game genres and internet gaming disorder. *Cyberpsychology, Behavior, and Social Networking*, *19*(4), 270–276. https://doi.org/10.1089/cyber.2015.0415

Lemmens, J. S., Valkenburg, P. M., & Gentile, D. A. (2015). The internet gaming disorder scale. *Psychological Assessment*, *27*(2), 567–582. https://doi.org/10/f7gfs4

Livingstone, S. (2002). *Young people and new media: Childhood and the changing media environment*. Sage. https://doi.org/10.4135/9781446219522

Livingstone, S., & Third, A. (2017). Children and young people's rights in the digital age: An emerging agenda. *New Media & Society*, *19*(5), 657–670. https://doi.org/10.1177/1461444816686318

Meier, A., Beyens, I., Siebers, T., Pouwels, J. L., & Valkenburg, P. M. (2022). Habitual social media and smartphone use are linked to procrastination for some, but not all, adolescents. PsyArXiv. https://doi.org/10.31234/osf.io/y9fuv

Möller, A. M., Baumgartner, S. E., Kühne, R., & Peter, J. (2021). Sharing the fun? How social information affects viewers' video enjoyment and video evaluations. *Human Communication Research*, *47*(1), 25–48. https://doi.org/10.1093/hcr/hqaa013

Nikkelen, S. W. C., Vossen, H. G., & Valkenburg, P. M. (2015). Children's television viewing and ADHD-related behaviors: Evidence from the Netherlands. *Journal of Children and Media*, *9*(4), 399–418. https://doi.org/10.1080/17482798.2015.1088872

Nikkelen, S. W. C., Vossen, H. G. M., Valkenburg, P. M., Velders, F. P., Windhorst, D. A., Jaddoe, V. W. V., Hofman, A., Verhulst, F. C., & Tiemeier, H. (2014). Media violence and children's ADHD-related behaviors: A genetic susceptibility perspective. *Journal of Communication*, *64*(1), 42–60. https://doi.org/10/f57fkp

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, *3*, 173–182. https://doi.org/10.1038/s41562-018-0506-1

Palomar-Garcia, C., Fernández-Planells, A., & Sora-Domenjó, C. (2023). Uses and abuses of User-Centered Design: Literature review and proposal of a tool for evaluating ethics in the design of mobile applications. *Digital Creativity*, *34*(1), 37–52. https://doi.org/10.1080/14626268.2023.2165107

Peter, J., & Kühne, R. (2018). The new frontier in communication research: Why we should study social robots. *Media and Communication*, *6*(3), 73–76. https://doi.org/10/ggkjf3

Peter, J., Kühne, R., Barco, A., de Jong, C., & van Straten, C. L. (2019). Asking today the crucial questions of tomorrow: Social robots and the internet of toys. In G. Mascheroni & D. Holloway (Eds.), *The internet of toys: Practices, affordances and the political economy of children's smart play* (pp. 25–46). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-10898-4_2

Piotrowski, J. T., & Valkenburg, P. M. (2015). Finding orchids in a field of dandelions: Understanding children's differential susceptibility to media effects. *American Behavioral Scientist*, *59*(14), 1776–1789. https://doi.org/10/ggh73t

SeeMeBeMe (2023). Vision. https://seemebeme.org/about-2/

Siebers, T., Beyens, I., Pouwels, J. L., & Valkenburg, P. M. (2022). Explaining variation in adolescents' social media-related distraction: The role of social connectivity and disconnectivity factors. *Current Psychology*. Advance online publication. https://doi.org/10.1007/s12144-022-03844-y

Slater, M., Gonzalez-Liencres, C., Haggard, P., Vinkers, C., Gregory-Clarke, R., Jelley, S., Watson, Z., Breen, G., Schwarz, R., Steptoe, W., Szostak, D., Halan, S., Fox, D., & Silver, J. (2020). The ethics of realism in virtual and augmented reality. *Frontiers in Virtual Reality*, *1*, Article 1. https://doi.org/10.3389/frvir.2020.00001

Trilling, D., Araujo, T., Kroon, A., Möller, A. M., Strycharz, J., & Vermeer, S. (2024). Computational communication science in a digital society. In T. Araujo & P. Neijens (Eds.), *Communication research into the digital society: Fundamental insights from the Amsterdam School of Communication Research* (pp. 247-263). Amsterdam University Press. https://doi.org/10.5117/9789048560592_ch15

Valkenburg, P. M. (2017). Understanding self-effects in social media: Self-effects in social media. *Human Communication Research*, 43(4), 477–490. https://doi.org/10/gcmcjm

Valkenburg, P. M., Beyens, I., Pouwels, J. L., van Driel, I. I., & Keijsers, L. (2021). Social media use and adolescents' self-esteem: Heading for a person-specific media effects paradigm. *Journal of Communication*, *71*(1), 56–78. https://doi.org/10.1093/joc/jqaa039

Valkenburg, P. M., & Peter, J. (2009). Social consequences of the internet for adolescents: A decade of research. *Current Directions in Psychological Science*, *18*(1), 1–5. https://doi.org/10/cwrkk7

Valkenburg, P. M., & Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication*, *63*(2), 221–243. https://doi.org/10.1111/jcom.12024

Valkenburg, P. M., & Piotrowski, J. T. (2017). *Plugged in: How media attract and affect youth*. Yale University Press.

Vanden Abeele, M. M. P. (2021). Digital wellbeing as a dynamic construct. *Communication Theory*, *31*(4), 932–955. https://doi.org/10.1093/ct/qtaa024

van der Schuur, W. A., Baumgartner, S. E., Sumter, S. R., & Valkenburg, P. M. (2015). The consequences of media multitasking for youth: A review. *Computers in Human Behavior*, *53*, 204–215. https://doi.org/10.1016/j.chb.2015.06.035

van Driel, I. I., Giachanou, A., Pouwels, J. L., Boeschoten, L., Beyens, I., & Valkenburg, P. M. (2022). Promises and pitfalls of social media data donations. *Communication Methods and Measures*, *16*(4), 266–282. https://doi.org/10.1080/19312458.2022.2109608

van Oosten, J. M. F. (2016). Sexually explicit internet material and adolescents' sexual uncertainty: The role of disposition-content congruency. *Archives of Sexual Behavior*, *45*(4), 1011–1022. https://doi.org/10/f65z36

van Reijmersdal, E. A., & van Dam, S. (2020). How age and disclosures of sponsored influencer videos affect adolescents' knowledge of persuasion and persuasion. *Journal of Youth and Adolescence*, *49*(7), 1531–1544. https://doi.org/10.1007/s10964-019-01191-z

van Straten, C. L., Peter, J., Kühne, R., & Barco, A. (2022). On sharing and caring: Investigating the effects of a robot's self-disclosure and question-asking on children's robot perceptions and child–robot relationship formation. *Computers in Human Behavior*, *129*, Article 107135. https://doi.org/10.1016/j.chb.2021.107135

Verbeij, T., Pouwels, J. L., Beyens, I., & Valkenburg, P. M. (2022). Experience sampling self-reports of social media use have comparable predictive validity to digital trace measures. *Scientific Reports*, *12*, Article 7611. https://doi.org/10.1038/s41598-022-11510-3

Wald, R., Piotrowski, J. T., Araujo, T., & van Oosten, J. M. F. (2023). Virtual assistants in the family home. Understanding parents' motivations to use virtual assistants with their child(dren). *Computers in Human Behavior*, *139*, Article 107526. https://doi.org/10.1016/j.chb.2022.107526

Wald, R., Piotrowski, J. T., van Oosten, J. M. F., & Araujo, T. (2023). Who are the (non-) adopters of smart speakers? A cross-sectional survey study of Dutch families. *Tijdschrift voor Communicatiewetenschap*. Advance online publication. https://doi.org/10.5117/TCW2023.X.001.WALD

White, E. B. (1950). *One man's meat*. Harper and Brothers.

Wolfers, L. N., Kitzmann, S., Sauer, S., & Sommer, N. (2020). Phone use while parenting: An observational study to assess the association of maternal sensitivity and smartphone use in a playground setting. *Computers in Human Behavior*, *102*, 31–38. https://doi.org/10.1016/j.chb.2019.08.013

About the author

Jessica Taylor Piotrowski is a Full Professor at ASCoR, where she holds the Chair in Communication in the Digital Society. As a media psychologist, she focuses on identifying risk, resiliency, and enhancement factors that allow youth to become engaged digital citizens. E-mail: J.Piotrowski@uva.nl