Title: How digital technologies become embedded in family life across generations: scoping the agenda for researching 'platformised relationality'

Author version accepted for publication by the journal Families, Relationships and Societies

Authors and affiliations

Ola Erstad, University of Oslo, Norway

Kristinn Hegna, University of Oslo, Norway

Sonia Livingstone, London School of Economics and Political Science, UK

Oana Negru-Subtirica, Babeş-Bolyai University, Cluj-Napoca, Romania

Mariya Stoilova, London School of Economics and Political Science, UK

Abstract

This article advances the unfolding research agenda on families, relationships and societies in the so-called 'platform society' by applying a relational lens and a multigenerational approach. Our scoping review of the multidisciplinary research literature revealed two main themes linking relationality and digital platforms: (1) the intensification of connectedness, especially in relation to intimacy, belonging and care, and (2) power struggles and conflicts in a context of interdependency and vulnerability. The studies identified suggest that relationality is transformed rather than interrupted through the emergence of new platformed practices as well as the reconfiguration of existing ones. Hence we propose an emphasis on 'platformised relationality', and call for greater specificity in the analysis of platform affordances in future research on families' engagement with digital platforms, as well as greater attention to family relationships beyond the often-studied parent-child relationship.

Key messages

- 1. A substantial literature on the platformisation of intimacy, belonging and care finds that family uses of technologies enhance more than they undermine the quality of family connections, intimacy and care, especially for dispersed family members.
- 2. Literature on how digital technologies become embedded in domestic power struggles finds that emerging practices of surveillance can be as much welcomed as resisted within families, and that children may assert their agency through use of technology in new ways.
- 3. Although families are often multigenerational, this scoping review of how digital technologies mediate family relationships finds an overwhelming focus on the parent–child relationship and a lack of studies exploring the experience of grandparenting in a digital age.

4. Within the growing literature on how relationality within families intersects with digital technologies, we identify considerable potential to add specificity to, and theorise more deeply about, the nature of platformisation and its affordances for family life.

Keywords: digital technologies, platforms, family relationships, relationality, generations, intimacy, power dynamics

Introduction: relationality in the age of platformisation

Just a few years ago, who could have imagined a world where parents were gig workers, children's education relied on Google Classroom, grandparents were supported via Care.com, and families connected via WhatsApp, chose their holidays on TripAdvisor, shopped on Amazon and eBay, and relaxed to Netflix and Spotify? In just two decades, digital platforms have come to define our age. Such technological transformations have provoked interest in the implications of digital technologies for family life, even suggesting the advent of the 'digital family' (Taipale, 2019). This article seeks to contribute to these existing efforts by advancing the unfolding research agenda on the study of families, relationships and societies where it intersects with critical analysis of the potentially transformative significance of digital platforms and related technologies.

The tech giants Alphabet, Amazon, Apple, Meta and Microsoft, together worth over US\$8 trillion in May 2021 (*The Wall Street Journal*, 2021), comprised five of the eight largest companies in the world in 2022 (Statista, 2023). Each has embraced the potential of platforms – namely, modular programmable architectures that allow third party developers to build applications (apps) through a software interface (Application Programming Interface, API) – as a key plank of its business strategy. For example, Facebook, founded as a social network site in 2004, was transformed into a platform in 2006 when the company introduced the Facebook Development Platform. This gave developers access to users' data to create a multisided market connecting users, advertisers and third party app developers such as Tinder (Helmond, 2015). Similarly, Minecraft began as an 'indy' product but was then made programmable, and hence a platform, through the introduction of Redstone.

Platforms entered the popular imagination when Tim O'Reilly defined Web 2.0 in 2004, the web itself being the (open, decentralised, interoperable) platform on which apps could operate (Helmond, 2015). The transformation wrought by platforms relies on the simultaneous creation of data through user activity, itself increasingly organised through algorithmic operations (e.g., Facebook's News Feed) and the open API that enables developers (ranging from hobbyists to big business) to create new apps, thereby both sharing and, increasingly, monetising that data. However, platforms not only signify a change in online data flows and their capitalisation; they also transform the fields in which they operate (hence academic discussion of, variously, platform economy, platform capitalism, platform society, platform culture, and more) – a process characterised as 'platformisation' (Nieborg and Poell, 2018). As Bolin (2023: 11) observes, in today's digital environment 'large platform companies, advertisers, telecommunications providers, publishers, and other media companies are interconnected with financial services, retail and consumer goods, but also with welfare systems and governmental management.' In short, platforms increasingly provide the infrastructure for communication, work, learning, care, intimacy, entertainment,

commerce and participation, and are widely taken for granted and relied on in everyday life (Plantin et al, 2018).

Among other consequences, platformisation marks a transformation in how people interact in their everyday lives with and through these nearly ubiquitous and highly commercialised digital technologies (van Dijck et al, 2018). Previous analyses grounded in the social shaping and social consequences of innovative technologies - whether for work, education, commerce or everyday life (Lievrouw and Livingstone, 2006) - often position 'digitalisation' and 'datafication' within a longer history of mediation and mediatisation processes within and across societies (Lundby, 2014; Barassi, 2020; Bolin, 2023). Building on and bringing together these developments, in this article we focus on platformisation to examine how uses of digital technologies may shape the lives of contemporary families (Goulden, 2021; MacDonald et al, 2023) by platformising family relations. While recognising the value of a multiplicity of approaches, the integration of research on family life with that on digital technologies raises some specific research questions that invite a relational lens. By relationality, we refer to the internal and external interpersonal dynamics through which families are constituted, together with the contexts within which they are simultaneously embedded and which they co-construct. This means looking beyond the generally wellresearched focus on individual motivations, beliefs and activities to examine the variously collaborative or conflictual negotiation of relationships.

Twamley et al (2021: 3) observe that, 'relationality has emerged as an increasingly popular lens and framework through which to examine family.' Similarly, Roseneil and Ketokivi (2016) write of the 'relational turn' in the sociology of the family that sees individuals, in both their interpersonal and intrapersonal aspects, as inherently relational. The concept of relationality builds on feminist philosophical discussions of the self (Smart, 2011) and criticisms of individualisation theory (Jamieson et al, 2006). It construes family connectedness as 'togetherness and belonging that goes beyond the individual relationships of which it is comprised ... including the possibility of family culture in its own right, the significance of time past and future, and the sense of being part of something bigger' (Ribbens McCarthy, 2012: 85). Our interpretation of relationality accords with what has been described as an 'intra-actional approach' (Mauthner, 2021) or 'strong definition' of relationality (Twamley et al, 2021), which sees practices and subjectivities as negotiated between and within subjects, continuously dynamic and performative. Thus, family and kinship are understood as dynamic and constituted through relational practices (Finch and Mason, 2000) for which, increasingly, digital technologies play an influential part (Evans et al, 2019; Goulden, 2021), as suggested by the term 'digital relationality' (MacDonald et al, 2023).

While families encompass diverse relationships, a multigenerational approach can provide particular insights into how ideas and experiences of relationality change over time and the lifecourse (Nilsen, 2021), including as regards media and technological transformations (Bolin, 2017, 2023). Aroldi and Colombo (2020: 576) assert that, 'the era of platforms undoubtedly constitutes the ecosystem in which the next generations all over the world are forming.' This is to highlight both the reflexive and participatory co-creation practices of 'media generations' living through socio-technological transformations, as well as the potential consequences of platformisation as a distinctive discontinuity in the media ecosystem (Aroldi and Colombo, 2020). Further, while recognising the variety of methodological operationalisations of 'generations', we chose to focus on kinship as a relational practice within three-generation families. As Finch and Mason (2000: 167) point out, kinship is a set of practices that are relational and active: 'they are made and remade over time as each of us works out our own relationships with others with whom we share ties of blood, legal contact or other commitment.'

Due to the emerging character of this field, this article adopts the scoping review methodology as particularly suited to generating a broad overview of research relevant to families' generational and relational dynamics of engaging with digital technologies. We ask: what does the existing empirical evidence on families, generations and digital technologies reveal about the relational aspects of family life in the age of platformisation?

Methods

A scoping review allows researchers to identify emerging debates, clarify key concepts, examine specific findings and evaluate significant gaps that suggest promising future directions (Tricco et al, 2016). We followed the flexible protocol recommendations suggested by Peters et al (2015), given the emerging nature of the field. Specifically, the consortium members of the Platforming Families (PlatFAMs) project employed combinations of search. We combined groups of keywords related to digital technology, family and generations, and relationality in systematic searches of international, multidisciplinary databases. This was supplemented by 'backward' and 'forward snowballing' (Hepplestone et al, 2011; Jaskiewicz and Tulenko, 2012) of selected journal searches and expert consultations.

In all, the search produced 1,348 titles. Of these, 112 were removed as duplicates and 573 were excluded based on title (a total of 685 sources, see Figure 1). The remaining 663 studies were screened based on abstract (removing a further 457) and then on full text (removing 153 records) before coding and screening based on the inclusion criteria selected to match the aims and scope of the review. We included papers published after 2012, English language and peer-reviewed papers. During the full-text screening we selected studies with a multigenerational perspective and samples including data from two or three generations based on the empirical study of digital technology, digital media or platforms to match the focus of the review. Of particular importance was the inclusion criterion defining a relational perspective matching our focus, exemplified by concepts and perspectives such as digital kinning (see Guerzoni and Sarcinelli, 2019; Baldassar et al, 2020), kinkeeping, closeness, intimacy, emotionality, care, family practices, relationality, roles, hierarchy, openness, open communication, interaction, quality of relationships, digital connectivity, mediatised relationships, narrow outreach communication, doing family, and obligations.

Following the screening, 53 studies were included in the final sample for analysis (see Figure 1). These predominantly concerned Europe (n=23) and North America (n=22), with a few addressing Africa and the Middle East (n=7) and Asia (n=6).¹ The studies encompassed diverse disciplines including anthropology, media and communication, computer–human interaction, education, psychology, sociology and family studies. The majority included two generations (n=40) and only 13 included three generations in their methods and findings. Of the two-generation studies, most included parents and children (n=28), with six studies with

¹ The studies covering more than one region were counted under each region.

parents and adult children, one study with grandparents and children, and five studies with grandparents and parents. While the studies covered various devices, communication technologies and digital services, they were often unclear about or combined a variety of technological features, making it hard to differentiate between the specific affordances examined.

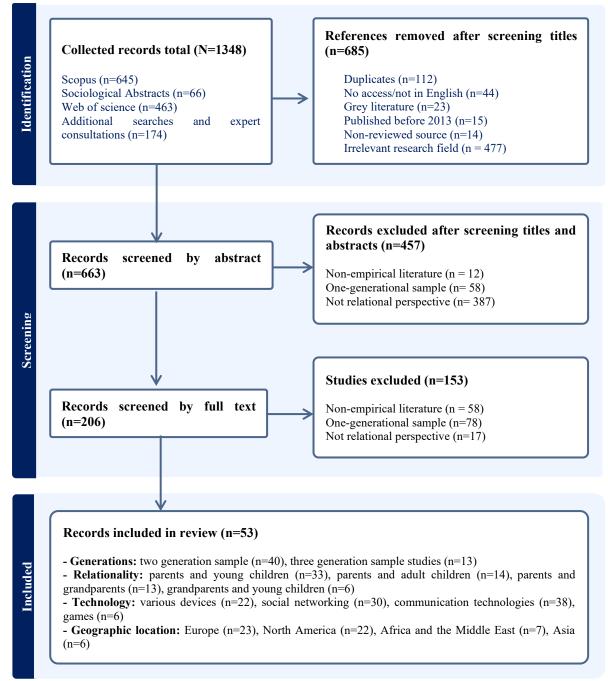


Figure 1: PRISMA diagram - identifications, screening and inclusion of records

Results: platformisation and the transformation of relationality

After reading the 53 articles several times, and coding according to the selection criteria and our focus on relationality, two main themes emerged. The first concerned the intensification of connectedness, especially in relation to intimacy, belonging and care, and the second,

power struggles and conflicts in a context of interdependency and vulnerability. While other topics were addressed, these were only sporadically represented and thus await further research. Below we discuss the scoping review findings according to these two themes, also recognising their intersections.

Platformised connectedness, intimacy and care

Family relationality among and across individuals and households is symbolically woven together through care and emotional labour. Our review shows that, rather than substituting for in-person communication, technologically facilitated contact not only complements other forms of communication but also the exchanges among family members have generally intensified due to particular app affordances (Ahlin, 2020). The effect is to reinforce, extend and potentially reconfigure rather than displace the existing forms of relationality that used to rely on geographical and temporal co-presence to construct family, primarily through cohabitation and childrearing. This can be seen among multiple forms of cross-generational connections and may be intensely experienced when alternative means of connection are lacking. Drawing on a study on Filipino migrants in the USA, Francisco (2015: 180) argues that 'technology, at times, becomes the only viable option' to build meaningful relationships with distant family members. Adult children living away from family find platforms crucial in maintaining their relationship with parents, allowing for effortless communication that both reassures the parents and guarantees the independence of the children (Barrie et al, 2019). They afford an increased feeling of meaningful social connection with distant family members by creating new ways of being in touch more regularly. Several studies on transnational families point to the role of social media apps in creating family intimacy, belonging and multidirectional care work especially in contexts where no practical alternatives exist (Francisco, 2015; Alinejad, 2021; Toumi, 2023).

Platformised practices of care have a growing importance for the oldest generation, compensating for the geographic dispersal of family members. For example, a qualitative study of three-generation transnational families in Tunisia found that the older generation learned how to use digital apps (e.g., Skype) after one of their children migrated overseas. Apps were 'the means to virtually unite what geographical distance separates, not only in terms of communication, but also in terms of the social practices that they are used to perform as a family', such as cooking, enjoying meals together and even attending family events (such as a wedding) (Toumi, 2023: 150). Relatedly, a multimethod Canadian study with 12 older adults (aged 74-95) found that use of digital technologies could increase the feeling of family connectedness of elderly relatives (Neves et al, 2019). Similarly, a study of older parents and their adult children in rural Thailand concluded that the use of communication technology contributed to bridging the generation gap by enabling older parents to understand the modern world and their adult children's lives, and 'the very different world and problems their children may be facing' (Thomas, 2020: 201). In such ways, technology may bring generations closer together (see also Grønning, 2021), with 'platformed relationality' helping to overcome barriers and limitations that would otherwise interrupt the flow of care, intimacy and support.

The reviewed studies show not only that communication of emotions and cultural resources, care and support take place between the generations, but also that digital connectivity contributes to changing family members and the nature of intimacy itself. These increasingly platformised interactions enable children to play a more active role in family networks (Prout,

2011). Family belonging is based on the strength of the connection (Morgan, 1996; Jamieson et al, 2006; Stoilova et al, 2017; Roseneil et al, 2020) – both emotional and technological – and the platformisation of family life incorporates both aspects. A couple of studies point out the 'techno-emotional mediation of care' (Alinejad, 2021: 446; see also Francisco, 2015) and how platforms 'may change the subtle resonances of intimacy, closeness, and privateness' (Alinejad, 2021: 446) based on how they are felt, experienced, remembered and given meaning. Drawing on the theory of the mediatisation of emotions and an empirical study with 20 Romanian transnational families, Alinejad argues that platformisation enables a process of 'social sensitisation' in which care and love are changed across large distances in a 'process by which platform-device technicities, embodied media practices, and normative social forces together give rise to intimate modes of sensory (dis)engagement' (2021: 455). As Baldassar and colleagues (2016: 134) have argued, digital connectivity can intensify 'the circulation of various (cultural, emotional, economic and social) resources' across distance and 'may also facilitate intergenerational solidarities at a distance, expanding transnational emotional and other forms of support.'

Some studies in the review focused on everyday digital family practices, drawing on concepts such as 'doing intimate family work' (Morgan, 2011) and the 'performativity' and 'display' of family relations (Finch, 2007). These studies point to the role of platforms in both the creation of family belonging and its (public) display on social media platforms. A study of multigenerational families spread across several Swedish and US households investigated the small acts performed in everyday life through ICT (Eklund and Sadowski, 2023), revealing how intimacy is produced by allowing family members to have a peek into the mundane, an 'unvarnished truth' of everyday life. They point to how family communication often happens in small 'intimate' groups, often even between two individuals where 'staging' is not necessary. In this way, platforms allow a look at the messiness of the everyday lives of close family members (e.g., 'dedicated family groups open doors into messy and unstaged homes', Eklund and Sadowski, 2023: 770).

This realm of the intimate can become a specific way to do family work with distant family members, quite different from the self-promotional presentation of happy lives many users present publicly on social media (Barnwell et al, 2023; see also van Dijck, 2013). For example, Barnwell et al (2023) describe how the 'family-ness' of Instagram posts is constructed, and demonstrate 'the complexity with which users are employing the visual and social affordances of Instagram to affirm the intimacy and value of their familial relations' (2023: 18). Other examples of digital family practices mentioned in the literature were negotiating and buying digital technology, such as a new gaming system (Willett, 2017), blogging and sharing photos from joint family events (Jenkins and Sun, 2019), sharing photos and shared phone use during meals (Elias et al, 2021), and WhatsApp as a 'virtual transconnective space' where family members got together and created a sense of family belonging (Palviainen and Kędra, 2020).

Our review showed that the lives of family members on social media involve the display of family time (both special occasions like birthdays and holidays, as well as mundane activities like cooking meals and brushing teeth), parenting practices (doing fun activities or displaying intimate relationships) or intergenerational connections (various displays of intimacy, emotional connections and memory-making within the family context). Based on a Danish study of three generations, Grønning (2021: 733) shows how families may use digital modes

of communication in the construction of 'micro-memories' of family relations, articulating these as 'vernacular archives of their family's proximate past', co-constructing narratives by which they 'mutually construct their kinship and familial memories' (2021: 739). These platformised relationships are affective in nature and constructed through nostalgia and memory (its co-creation, archiving and reviewing) (Grønning, 2021). Visual affordances play an important part in such exchanges as 'keepers' of these reminiscences (Francisco, 2015; Alinejad, 2021; Barnwell et al, 2023).

The platformisation of family life thus allows for new ways of capturing and retaining moments of intimacy and sharing them beyond the immediate physical co-presence. This enables not only the archiving but also the reliving of such moments. An important role of these practices is the performativity of certain types of family life (happy, relaxed, shared and unconflicted), and the 'uplifting' of the mundane by giving it a valued status. Once posted and shared on platforms, moments of relationality seem to 'gain a life of their own' – they may become accessible beyond the family circle, durable in ways that can outlive participation by family members and appropriated by platforms themselves, when using them for commercial purposes or, for example, auto-reminding us what happened 'on this day.'

Power struggles and ruptures of platformised relationality

The embedding of digital platforms in family life facilitates new power struggles (Jamieson, 2013), whether over digital resources directly, or because digital mediations and shifting domestic practices can make family interdependencies, inequalities and vulnerabilities newly visible or even risky. Despite some benefits of the affordances of digital technologies, the platformisation of relationality poses particularly poignant concerns around issues including inequalities and marginalisation, the lack of a unique tactile experience, and the overburden of a constant online presence.

The barriers to the domestication of technology among older people include low social support, negative attitudes, low digital literacy and usability difficulties (Neves et al, 2019). While platformised communication and care can bring some family members closer, for others - usually those less able to navigate and benefit from such multifunctional platforms it can highlight their exclusion. In a sample of six multigenerational families from 18 households, Eklund and Sadowski (2023) analysed how families negotiated platformised relationality via decisions about sharing and group membership. They note how each family member made individual contextualised decisions about the specific configurations of their family in groups on social media platforms, the scale and extent to which they engaged with these family members, and who should be 'kept in the loop' or left out of each interaction. Platform affordances enable such fine-tuning of relationality and empower family members, including the youngest ones, to make these decisions. Similarly, Acedera and Yeoh (2021), in their study of transnational Filipino families, find that new digital affordances enable new modes of care from a distance and allow non-resident parents to make decisions and assert their authority from afar. Nishitani's (2014: 220) study of families from the Tongan diaspora in Australia concludes similarly that 'physical distance and social distance are intricately related, and these are sometimes manipulated by the use of communication technologies.' Platform affordances allow family members to choose to remain close and engaged or maintain emotional distance by choosing to 'disconnect'. In this sense, platforms become sites of power play and decision making in which those who have access and mastery can have control over the boundaries of relationality.

Further tensions or exclusions might arise as not all forms of connection online create the same feeling of closeness. For example, a quantitative study of 504 parent-child dyads in the USA explored the frequency and reasons for family mobile communication and the associated feelings of closeness (Warren and Aloia, 2018). The study found that relation-centric uses of mobile devices (to express support or handle conflict) were associated with feelings of closeness, while more functional uses (e.g., coordinating schedules, sharing content) did not contribute to the feeling of closeness of the relationship. While both aspects are important for everyday family life, arguably not all are contributing to deepening the connection between family members.

Digital practices in families are often analysed as enmeshed within family conflicts and the power dynamics of family life and social constructions of positions in the family. Therefore, it is important to contextualise platformised relationality within the historically and culturally changing power balance of family relationships across the generations (Giddens, 1992). Parent-child relationships are increasingly recognised as interactive and transactional - with children as agentic partners who actively contribute to and shape these relationships (Levinson and Barron, 2018; Nelissen et al, 2019; Turner et al, 2022). Platformised relationality plays an important part in this as children are often seen as the experts on all things digital. Children might have a defining influence over their family's use of media technology (Correa, 2014), even acting as media brokers for their parents (Katz, 2010), or challenging parental decisions and practices (Lipu and Siibak, 2019). For example, a longitudinal two-generation case study of Latino families in the USA showed a shift in power dynamics within the family in favour of children following the introduction of new devices for learning (Levinson and Barron, 2018). This enhanced family communication, learning strategies and belonging as both parents and children began learning together and enjoying each other's creativity through technology. Children sometimes act as 'warm experts' (Bakardjieva, 2005) and proxies for explaining the digital to their parents, which confers them greater power in family relations.

Such power shifts can, however, create conflict and disagreements as families actively negotiate platformised relationality. For example, some studies discuss the difference between generations' experiences and perspectives. A two-generation study on parents and their emerging adult children in the USA focusing on technologically assisted family communication found that in some cases the experiences of the two generations could differ significantly (Barrie et al, 2019). The parent generation was much more likely to say that the use of technology and media interfered with healthy family functioning, undermining quality time and creating tensions. Children spending a substantial amount of time on platforms with their friends while being at home was what felt most disrupting to parents. Children, on the other hand, felt that technology enabled their parents to be overly present in their lives. While the two generations agreed that technology helped maintain family relationships, particularly regarding grandparent–grandchild interactions (Barrie et al, 2019), it could be argued that there can be 'too much' connected presence, which can have disruptive effects on relationality.

A number of studies discussed the use of platforms by parents as a means of surveillance of their children and pointed to the tensions arising as a result of this (Francisco, 2015; Hänninen et al, 2021; De Leyn et al, 2022). Some children expressed 'a sense of security and comfort' when such surveillance was seen as a 'normalised practice of care' (De Leyn et al,

2022: 1120), especially when children were younger, as shown by a quantitative study of 157 Portuguese families (Carvalho et al, 2017). Yet other children employed strategies of avoidance, challenging boundaries and rebellion against their parents' practices (Francisco, 2015). While the issue of unwanted parental surveillance is not new, platforms seemed to offer new venues for these practices, potentially creating opportunities for more family conflict.

Surveillance was also a gendered practice (Jamieson, 2013). Tapping into perspectives on good parenting and socially acceptable identities of mothers versus fathers (Livingstone and Blum-Ross, 2020), in a two-generation study of 15 Swiss families, Balleys (2022) analysed each family member's views of the other family members' digital practices. Fathers assumed a 'geek' identity (i.e., very digitally involved and knowledgeable, permissive and collaborative with the children's digital media use) while mothers portrayed the 'good mom' figure as successfully regulating the children's screen use – marked by the children's perception that mothers were too restrictive and controlling with digital practices in the household ('bad mom'). Nevertheless, social expectations of being a 'good mom' centred round being a controlling gatekeeper of children's digital media use.

This reiterates existing inequalities or shifts in the role of children as the family experts in using digital media. Children often negotiate family conflicts differently with their mother versus their father, and media technology offers them an advantage over both parents, in that they broker technology use in the family. Similarly, important gender differences were found by a Finnish study, showing that women (mothers, daughters, sisters and maternal grandmothers) communicate more often than men (Danielsbacka et al, 2022). All these inequalities lead to barriers to platformised relationality for some family members who may need help from others to 'broker' their participation.

Conclusions: defining and developing research on family relationships in a digital world

The sociology of the family is increasingly attending to digital platforms as part of its commitment to contextualising critical inquiry within a multidimensional account of the changing meaning and contours of the 'family'. It is important to avoid deterministic or reductive accounts, and to recognise that, especially in the West, historical processes of individualisation, globalisation, urbanisation and commercialisation are positioning families in ways that potentially render digital technologies simultaneously as both appealing and problematic. As is apparent from the breadth of the academic journals included in our scoping review, multiple disciplines and diverse theoretical framings contribute to the growing body of empirical research on family relationships in a digital world.

Most of the reviewed studies about digital technologies across generations acknowledge their impacts are mixed, being variously both beneficial and detrimental, although the benefits are more often emphasised. Different generations maintain their connections using technology, and consider it supportive of family conflict mitigation, for example around the facilitation of conversations about sensitive topics. The studies we reviewed detail the co-construction of family intimacy through digital technology, with emotionality, family everyday habits and intra- and intergenerational hierarchies being interwoven in the platform environment. In such ways, they provide evidence for the 'intra-action' component of relationality (Emirbayer, 1997; Mauthner, 2021). This diverse body of empirical work positions the

individual as an inherent part of a growing (family) system that shapes how each family member (re)defines family and the individual by dynamically creating meaning through mundane mediated acts of communication. Importantly, emotions are given extensive space in multigenerational discourse, and digital technology seems to offer not only new tools to display emotions but also new affordances for negotiating family emotions (see, for example, Jenkins and Sun, 2019; Alinejad, 2021; Grønning, 2021).

Research on the 'digital family' points to the close intersections between increasing geographical dispersion with intensified emotional connectedness sustained through technology, creating (global) networks through practices of care (also known as 'global care chains') (Hochschild, 2000; Williams, 2011). Technological affordances are often discussed as key facilitators of distant relationships, enabling 'connected presence' (Licoppe, 2004) and intimacy over time and space (Baldassar et al, 2016). With the advance of platformisation, family connections are increasingly technologically mediated, raising questions about the possible effects on relationality. For example, in his study of home-based platforms (Amazon Household and Google Families), Goulden (2021) concluded that the family is being 'deleted' as platforms rupture existing practices just to offer solutions to the very raptures that they introduce. Such accounts give rise to worries that technology is replacing human interaction and that people are losing their 'real' connection (see, for instance, 'technoference' studies; Elias et al, 2021). However, the studies identified by the scoping review suggest that, broadly speaking, the evidence does not support the 'loss of intimacy' hypothesis (McDaniel, 2015; Amaliyah and Agustina, 2023). Quite the opposite - the evidence shows that technology affords new ways of giving and receiving intimacy and enabling practices of care in contexts where it would previously have been difficult, if not impossible.

Returning to our research question about what the evidence on families, generations and digital technologies reveals about the relational aspects of family life in the age of platformisation, our results suggest that relationality is transformed rather than interrupted, through the emergence of new practices as well as the reconfiguration of existing ones. Specifically, we identified two main directions in which relationality is being transformed: (1) continued but intensified connectedness and (2) power struggles and ruptures of platformised relationality. On the one hand, digital technologies not only provide the infrastructure for but also amplify the connections among family members associated with distinctive platformised practices of intimacy, belonging and care. On the other hand, partly because of these intensified connections, power struggles can develop, linked to digitally mediated forms of interdependency and vulnerability. Such tensions are embedded in the everyday digital lives of families (Taipale, 2019), and invite a transactional or strongly relational lens insofar as family practices themselves are being reconfigured through their platform engagement.

Specifically, we have shown how the platformisation of relationality, as documented in empirical studies, reinforces rather than displaces existing forms of contact (Danielsbacka et al, 2022: 10), enabling what some term the 'techno-emotional mediation of care' (Alinejad, 2021: 446). This allows for sustained and scalable meaningful social connection among family members by bringing multiple generations together through 'platformised intimacy' (Grønning, 2021) and multidirectional care (Toumi, 2023). This complex mechanism of connecting families often relies on the public display of intimacy and belonging on social

media platforms, through mundane acts performed in everyday life. This display of everyday family life includes family time, parenting practices and intergenerational connections. More recent studies suggest that the digital world facilitates the co-construction of 'micro-memories' and narratives of family relationships (Grønning, 2021: 733), with visual affordances playing a key role in retaining moments of intimacy, by archiving and reliving them (Alinejad, 2021).

Our analysis of the power struggles and ruptures of platformised relationality shows that these technologies may also create inequalities and marginalisation of those less confident with technological advancements (usually the older generation) and the overburden of a constant online presence. Different family members may have conflicting aims or modes of platform use, where parents may want to increase their knowledge of and presence in children's digital lives, while children may prioritise gaining independence and connecting with friends (Hänninen et al, 2021). The power struggles involved showed that family roles are also redefined in relation to digital practices (Balleys, 2022), with children gaining the position of family experts in using digital media and active negotiators of the boundaries of platformed relationality. This may be indicative of complex power shifts and new means of communicating in a family, facilitated by the distinctively pioneering and creative yet vulnerable position of youth in the digital society to a degree that appears to upset generational hierarchies and destabilise traditional sources of authority. Still, across generations, families seem to agree that technology helps maintain intimate relationships (Barrie et al, 2019: 17).

Within the emerging field of platformised relationality, an important gap relates to the lack of studies exploring the experiences of multigenerational families, particularly including older people. The generational dimension of families has only partially been covered by recent studies, albeit with the majority of research concerning two-generation studies (parents and children), with some of which the 'children' already adults. Another gap relates to the nuanced understanding of the impact of digital platforms. We found that most of the reviewed studies did not differentiate between the specific roles of different platforms (e.g., WhatsApp, Facebook, Instagram). This vastly underestimates the degree to which family life, including relationships, is now digitally mediated - or platformised - whether for work, education, travel, commerce, welfare, health, community or political life. Relatedly, we identified little specific attention to the nature or affordances of these digital devices, products and services except insofar as they facilitated either practices linked to intimacy or power within the family itself. Indeed, most papers included in our review take a very broadbrush approach to digital technology. A possible future development within this field could be a deeper understanding of how relationality is not only built (interaction) and mediated (transaction), but also platformised (immersive) through technology.

In conclusion, 'platformised relationality' is crucial for understanding the impact of digital technologies on family life in contemporary societies. Insofar as it is sometimes assumed in popular discourse that close multigenerational families represent the lost 'traditional' family, at a time when individualised social bonds are being prioritised (Beck, and Beck-Gernsheim, 2001; Wellman, 2001) in part because of the widespread use of social media, we (based on the evidence we have reviewed) would disagree. Our findings show that power struggles in family life reveal social and relational dynamics, which cannot be grasped if researchers (and popular discourse) focus on individual or supposedly self-sufficient technology users.

Bearing in mind both the strengths and limitations of the research identified in our review, there is clear scope for future research on relational dynamics and, perhaps, the 'platform family' (Goulden, 2019) that engages more closely with the specificity and complexity of digital platforms. This includes critical attention to the data ecology and data surveillance practices that fuel platformisation with apparent commercial interests as these intersect with or construct vulnerabilities or exclusions that affect different family generations and circumstances. Future researchers are left with the task of more thoroughly theorising the resulting research insights in relation to either of these fields, possibly forming a new field of research as a result.

5. References

Note: * marks studies included in the evidence review.

Acedera, K.F. and Yeoh, B.S.A. (2021) When care is near and far: care triangles and the mediated spaces of mobile phones among Filipino transnational families, *Geoforum*, 121: 181–91. https://doi.org/10.1016/j.geoforum.2021.02.021

*Ahlin, T. (2020) Frequent Callers: "Good Care" with ICTs in Indian Transnational Families. *Medical Anthropology: Cross Cultural Studies in Health and Illness*, 39(1), 69-82. https://doi.org/10.1080/01459740.2018.1532424

*Alinejad, D. (2021) Techno-emotional mediations of transnational intimacy: social media and care relations in long-distance Romanian families, *Media, Culture & Society*, 43(3): 444–59. https://doi.org/10.1177/0163443720972313

Amaliyah, S. and Agustina, M. (2023) Technoference: technology as 'third person' in romantic and family relationships, *Journal of Psychology and Instruction*, 7(2). https://ejournal.undiksha.ac.id/index.php/JoPaI/article/view/61169

Aroldi, P. and Colombo, F. (2020) Media, generations and the platform society, in *HCII 2020: Human Aspects of IT for the Aged Population. Healthy and Active Aging*, 6th International Conference, ITAP, Held as Part of the 22nd HCI International Conference, Copenhagen, Denmark, 19–24 July, pp 567–78. https://doi.org/10.1007/978-3-030-50249-2_40

Bakardjieva, M. (2005) Internet Society: The Internet in Everyday Life, London: SAGE Publications Ltd.

Baldassar, L., Wilding, R. and Worrell, S. (2020) Elderly migrants, digital kinning and digital home making across time and distance, in B. Pasveer, O. Synnes and I. Moser (eds) *Ways of Home Making in Care for Later Life*, London: Palgrave Macmillan, pp 41–63.

Baldassar, L., Nedelcu, M., Merla, L. and Wilding, R. (2016) ICT-based co-presence in transnational families and communities: Challenging the premise of face-to-face proximity in sustaining relationships, *Global Networks*, 16(2): 133–44. https://doi.org/10.1111/glob.12108

*Balleys, C. (2022) Familial digital mediation as a gendered issue between parents, *Media, Culture & Society*, 44(8): 1559–75. https://doi.org/10.1177/01634437221119020

Barassi, V. (2020) Datafied times: Surveillance capitalism, data technologies and the social construction of time in family life, *New Media & Society*, 22(9): 1545–60. https://doi.org/10.1177/1461444820913573

*Barnwell, A., Neves, B.B. and Ravn, S. (2023) Captured and captioned: representing family life on Instagram, *New Media & Society*, 25(5): 921–42. https://doi.org/10.1177/14614448211012791

*Barrie, C., Bartkowski, J. and Haverda, T. (2019) The digital divide among parents and their emerging adult children: intergenerational accounts of technologically assisted family communication, *Social Sciences*, 8(3): 83. https://doi.org/10.3390/socsci8030083

Beck, U. and Beck-Gernsheim, E. (2001) *Individualization: Institutionalized Individualism and Its Social and Political Consequences*, London: SAGE Publications Ltd.

Bolin, G. (2017) *Media Generations: Experience, Identity and Mediatised Social Change*, Abingdon: Routledge.

Bolin, G. (2023) Mediatisation, digitisation and datafication: The role of the social in contemporary data capitalism, *Central European Journal of Communication*, 16(1(33)): 7–18. doi: 10.51480/1899-5101.16.1(33).1.

*Carvalho, J., Francisco, R. and Relvas, A.P. (2017) ICTs and family functioning: a study on Portuguese families with adolescents and emerging adults, *Contemporary Family Therapy*, 39(4): 281–8. https://doi.org/10.1007/s10591-017-9436-8

Correa, T. (2014) Bottom-up technology transmission within families: exploring how youths influence their parents' digital media use with dyadic data: bottom-up technology transmission within families, *Journal of Communication*, 64(1): 103–24. https://doi.org/10.1111/jcom.12067

*Danielsbacka, M., Tammisalo, K. and Tanskanen, A.O. (2023) Digital and traditional communication with kin: displacement or reinforcement?, *Journal of Family Studies*, 29(3): 1270–91. https://doi.org/10.1080/13229400.2022.2040575

*De Leyn, T., De Wolf, R., Vanden Abeele, M. and De Marez, L. (2022) In-between child's play and teenage pop culture: tweens, TikTok & privacy, *Journal of Youth Studies*, 25(8): 1108–25. https://doi.org/10.1080/13676261.2021.1939286

*Eklund, L. and Sadowski, H. (2023) Doing intimate family work through ICTs in the time of networked individualism, *Journal of Family Studies*, 29(2): 758–73. https://doi.org/10.1080/13229400.2021.1984278

*Elias, N., Lemish, D., Dalyot, S. and Floegel, D. (2021) 'Where are you?' An observational exploration of parental technoference in public places in the US and Israel, *Journal of Children and Media*, 15(3): 376–88. https://doi.org/10.1080/17482798.2020.1815228

Emirbayer, M. (1997) Manifesto for a relational sociology, *American Journal of Sociology*, 103(2): 281–317. https://doi.org/10.1086/231209

*Evans, R., Bowlby, S., Gottzén, L. and Ribbens McCarthy, J. (2019) Unpacking 'family troubles', care and relationality across time and space, *Children's Geographies*, 17(5): 501–13. doi: 10.1080/14733285.2019.1655139.

Finch, J. (2007) Displaying families, *Sociology*, 41(1): 65–81. https://doi.org/10.1177/0038038507072284

Finch, J. and Mason, J. (2000) Passing On: Kinship and Inheritance in England, London: Routledge.

*Francisco, V. (2015) 'The internet is magic': Technology, intimacy and transnational families, *Critical Sociology*, 41(1): 173–90. https://doi.org/10.1177/0896920513484602

Giddens, A. (1992) The Transformations of Intimacy, Cambridge: Polity Press.

Goulden, M. (2021) 'Delete the family': Platform families and the colonisation of the smart home, *Information, Communication & Society*, 24(7): 903–20. https://doi.org/10.1080/1369118X.2019.1668454

*Grønning, A. (2021) Micro-memories: digital modes of communication across three generations, *Memory Studies*, 14(4): 733–46. https://doi.org/10.1177/1750698020959810

Guerzoni, C.S. and Sarcinelli, A. (2019) Kinning and de-kinning: Rethinking kinship relatedness from its edges, *Antropologia*, 6(2): 7–12. https://hdl.handle.net/2268/247072

*Hänninen, R., Taipale, S. and Korhonen, A. (2021) Refamilisation in the broadband society – the effects of ICTs on family solidarity in Finland, *Journal of Family Studies*, 27(2): 161–77. https://doi.org/10.1080/13229400.2018.1515101

Helmond, A. (2015) The platformization of the web: Making web data platform ready, *Social Media* + *Society*, 1(2). https://doi.org/10.1177/2056305115603080

Hepplestone, S., Holden, G., Irwin, B., Parkin, H. and Thorpe, L.P. (2011) Using technology to encourage student engagement with feedback: A literature review, *Research in Learning Technology*, 19(2): 117–27. http://shura.shu.ac.uk/3762

Hochschild, A.R. (2000) Global care chains and emotional surplus value, in W. Hutton and A. Giddens (eds) *On the Edge: Living with Global Capitalism*, London: Jonathan Cape, pp 130–46.

Jamieson, L. (2013) Personal relationships, intimacy and the self in a mediated and global digital age, in K. Orton-Johnson and N. Prior (eds) *Digital Sociology*, London: Palgrave Macmillan, Chapter 1. https://doi.org/10.1057/9781137297792_2

Jamieson, L., Morgan, D., Crow, G. and Allan, G. (2006) Friends, neighbours and distant partners: Extending or decentring family relationships?, *Sociological Research Online*, 11(3): 39–47. https://doi.org/10.5153/sro.1421

Jaskiewicz, W. and Tulenko, K. (2012) Increasing community health worker productivity and effectiveness: A review of the influence of the work environment, *Human Resources for Health*, 10(1): 1–9. www.human-resources-health.com/content/10/1/38

*Jenkins, K. and Sun, K.C.-Y. (2019) Digital strategies for building spiritual intimacy: families on a 'wired' Camino, *Qualitative Sociology*, 42(4): 567–85. https://doi.org/10.1007/s11133-019-09432-0

Katz, V.S. (2010) How children of immigrants use media to connect their families to the community, *Journal of Children and Media*, 4: 298–315. https://doi.org/10.1080/17482798.2010.486136

*Levinson, A.M. and Barron, B. (2018) Latino immigrant families learning with digital media across settings and generations, *Digital Education Review*, 33: 150–69. https://doi.org/10.1344/der.2018.33.150-169

Licoppe, C. (2004) 'Connected' presence: the emergence of a new repertoire for managing social relationships in a changing communication technoscape, *Environment and Planning*, 22(1): 135–56. https://doi.org/10.1068/d323t

Lievrouw, L.A. and Livingstone, S. (eds) (2006) Handbook of New Media: Social Shaping and Consequences of ICTs (2nd edn), London: SAGE Publications Ltd.

*Lipu, M. and Siibak, A. (2019) 'Take it down!' Estonian parents' and pre-teens' opinions and experiences with sharenting, *Media International Australia*, 170(1): 57–67. https://doi.org/10.1177/1329878X19828366

Livingstone, S. and Blum-Ross, A. (2020) *Parenting for a Digital Future: How Hopes and Fears about Technology Shape Children's Lives*, Oxford: Oxford University Press.

Lundby, K. (ed) (2014) Mediatization of Communication, Vol 21, Berlin: De Gruyter.

MacDonald, M., Wright, A., Taylor-Beswick, A., Gillespie, K. and Collings, S. (2023) Digital relationality, rights, resilience, *The British Journal of Social Work*, 53(1): 216–35. https://doi.org/10.1093/bjsw/bcac140

Mauthner, N.S. (2021) Karen Barad's posthumanist relational ontology: An intra-active approach to theorising and studying family practices, *Families, Relationships and Societies*, 10(1): 33–49. https://doi.org/10.1332/204674321X16111601839112

McDaniel, B.T. (2015) 'Technoference': Everyday intrusions and interruptions of technology in couple and family relationships, in C.J. Bruess (ed) *Family Communication in the Age of Digital and Social Media*, New York: Peter Lang Publishing: 228-244.

Morgan, D. (1996) Family Connections, Cambridge: Polity Press.

Morgan, D. (2011) Rethinking Family Practices, New York: Springer.

*Nelissen, S., Kuczynski, L., Coenen, L. and van den Bulck, J. (2019) Bidirectional socialization: an actor-partner interdependence model of internet self-efficacy and digital media influence between parents and children, *Communication Research*, 46(8): 1145–70. https://doi.org/10.1177/0093650219852857

*Neves, B.B., Franz, R., Judges, R., Beermann, C. and Baecker, R. (2019) Can digital technology enhance social connectedness among older adults? A feasibility study, *Journal of Applied Gerontology*, 38(1): 49–72. https://doi.org/10.1177/0733464817741369

Nieborg, D.B. and Poell, T. (2018) The platformization of cultural production: Theorizing the contingent cultural commodity, *New Media & Society*, 20(11): 4275–92. https://doi.org/10.1177/1461444818769694

Nilsen, A. (2021) Independence and relationality in notions of adulthood across generations, gender and social class, *The Sociological Review*, 69(1): 123–38. https://doi.org/10.1177/0038026120931425

*Nishitani, M. (2014) Kinship, gender, and communication technologies: family dramas in the Tongan diaspora, *The Australian Journal of Anthropology*, 25(2): 207–22. https://doi.org/10.1111/taja.12089

*Palviainen, Å. and Kędra, J. (2020) What's in the family app? Making sense of digitally mediated communication within multilingual families, *Journal of Multilingual Theories and Practices*, 1(1): 89–111. https://doi.org/10.1558/jmtp.15363

Peters, M., Godfrey, C.M., Khalil, H., McInerney, P., Parker, D. and Soares, C.B. (2015) Guidance for conducting systematic scoping reviews, *International Journal of Evidence-based Healthcare*, 13: 141–6. doi: 10.1097/XEB.000000000000050.

Plantin, J.-C., Lagoze, C., Edwards, P.N. and Sandvig, C. (2018) Infrastructure studies meet platform studies in the age of Google and Facebook, *New Media & Society*, 20(1): 293–310. http://eprints.lse.ac.uk/67571

Prout, A. (2011) Taking a step away from modernity: reconsidering the new sociology of childhood, *Global Studies of Childhood*, 1(1): 4–14. https://doi.org/10.2304/gsch.2011.1.1.4

Ribbens McCarthy, J. (2012) The powerful relational language of 'family': Togetherness, belonging and personhood, *The Sociological Review*, 60(1): 68–90. https://doi.org/10.1111/j.1467-954X.2011.02045.x

Roseneil, S. and Ketokivi, K. (2016) Relational persons and relational processes: Developing the notion of relationality for the sociology of personal life, *Sociology*, 50(1): 143–59. https://doi.org/10.1177/0038038514561295

Roseneil, S., Crowhurst, I., Hellesund, T., Santos, C. and Stoilova, M. (2020) *The Tenacity of the Couple-Norm*, London: UCL Press.

Smart, C. (2011) Relationality and socio-cultural theories of family life. In: Jallinoja R, Widmer, E. (eds.) *Families and Kinship in Contemporary Europe*. Basingstoke: Palgrave Macmillan, 13-28.

Statista (2023) 'The 100 largest companies in the world by market capitalization in 2023', www.statista.com/statistics/263264/top-companies-in-the-world-by-market-capitalization

Stoilova, M., Roseneil, S., Carter, J., Duncan, S. and Phillips, M. (2017) Constructions, reconstructions and deconstructions of 'family' amongst people who live apart together (LATs), *The British Journal of Sociology*, 68(1): 78–96. http://dx.doi.org/10.1111/1468-4446.12220

Taipale, S. (2019) Intergenerational Connections in Digital Families, New York: Springer.

*Thomas, M.-H. (2020) The impact of communication technology and social media on intergenerational relationships between older individuals and their adult children in Bangkok, *Manusya: Journal of Humanities*, 23(2): 188–204. https://doi.org/10.1163/26659077-02302003

*Toumi, I. (2023) 'A wedding through a piece of glass': Transnational Tunisian family communication as driver of ICT adoption, *Media, Culture & Society*, 45(1): 142–56. https://doi.org/10.1177/01634437221099616

Tricco, A.C., Lillie, E., Zarin, W., et al (2016) A scoping review on the conduct and reporting of scoping reviews, *BMC Medical Research Methodology*, 16, 15. https://doi.org/10.1186/s12874-016-0116-4

*Turner, K.H., Stevens, E.Y., Paciga, K. and O'Byrne, W.I. (2022) Co-constructing meaning: parents and children navigating digital literacies together, *Journal of Adolescent & Adult Literacy*, 66(3): 158–67. https://doi.org/10.1002/jaal.1264

Twamley, K., Doucet, A. and Schmidt, E.-M. (2021) Introduction to special issue: Relationality in family and intimate practices, *Families, Relationships and Societies*, 10(1): 3–10. https://doi.org/10.1332/204674321X16111601166128

van Dijck, J. (2013) 'You have one identity': Performing the self on Facebook and LinkedIn, *Media, Culture & Society*, 35(2): 199–215. https://doi.org/10.1177/0163443712468605

van Dijck, J., Poell, T. and De Waal, M. (2018) *The Platform Society: Public Values in a Connective World*, Oxford: Oxford University Press.

Wall Street Journal, The (2021) 'Five tech giants just keep growing', 1 May, www.wsj.com/articles/five-tech-giants-just-keep-growing-11619841644

Warren, R. and Aloia, L. (2018) 'Parent-adolescent communication via mobile devices: influences on relational closeness, *Journal of Family Issues*, 39(15): 3778–803. https://doi.org/10.1177/0192513X18793924

Wellman, B. (2001) Physical place and cyberplace: the rise of personalized networking, *International Journal of Urban and Regional Research*, 25(2): 227–52. https://doi.org/10. 1111/1468-2427.00309

*Willett, R. (2017) Domesticating online games for preteens – discursive fields, everyday gaming, and family life, *Children's Geographies*, 15(2): 146–59. https://doi.org/10.1080/14733285.2016.1206194

Williams, F. (2011) Towards a transnational analysis of the political economy of care, in R. Mahon and F. Robinson (eds) *Feminist Ethics and Social Policy: Towards a New Global Political Economy of Care*, Vancouver: UBC Press, pp 21–38.

Funding details

This work was supported by CHANSE (Collaboration of Humanities and Social Sciences in Europe, the Resreach Council of Norway, the Estonian Resreach Council, the UK Research

and Innovation (UKRI, grant number ES/X005461/1), the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) of Romiana, the Ministry of Science and Innovation and the State Research Agency of Spain.

Conflict of interest statement

The Authors declare that there is no conflict of interest.

Acknowledgements

We would like to thank our colleagues from the PlatFAMs project and all the experts who advised us on the evidence review, as well as the anonymous reviewers of an earlier version of this manuscript.

Data access statement

No new data was analysed for this publication.