Privacy-protective behaviors in the mediatized domestic milieu: Parents and the intra- and extra-systemic governance of children's digital traces

Davide Cino
Università Cattolica del Sacro Cuore, Milan

Ellen Wartella
Northwestern University

Abstract

This paper reports on findings from a survey administered to a sample of 290 parents of children aged 0-12 living in the United States, focusing on parents' intra- and extra-systemic governance strategies adopted to steward their children's privacy online when adults post about them on social media, here intended as a proxy for social media literacy. Intra-systemic strategies are aimed at controlling parents' own sharing behavior when sharing about their children; extra-systemic strategies the behavior of people from surrounding systems (i.e., relatives). Based on descriptive statistics and results of a series of logistic regressions, this work reports on factors influencing the adoption of privacy-protective behaviors for digital-footprint management in the mediatized domestic milieu and advances considerations to promote educational and social media literacy interventions for parents.

Il lavoro riporta i risultati di una survey condotta con un campione di 290 genitori statunitensi di bambini di età compresa fra gli 0 e i 12 anni e si concentra sulle strategie di governance intra- ed extra-sistemica adottate per salvaguardare la privacy dei bambini online quando adulti terzi ne pubblicano contenuti sui social media. Tali strategie di governance sono qui intese come indicatori di social media literacy. Le strategie intra-sistemiche hanno il fine di regolare il comportamento di condivisione dei genitori; quelle extra-sistemiche il comportamento di soggetti esterni alla famiglia nucleare (i.e. parenti). Basandosi su statistiche descrittive e sui risultati di una serie di regressioni logistiche il lavoro evidenzierà alcuni fattori che influiscono sull'adozione di strategie di protezione della privacy dei bambini online, avanzando considerazioni atte a promuovere interventi di educazione ai media per genitori.

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1. Introduction

The past few years have seen a remarkable rise in the academic and lay interest around the topic of "sharenting", or the act of sharing multimodal representations of one's parenting and children on social media platforms (Blum-Ross & Livingstone, 2017). Although sharenting spurred many controversies in terms of blurring privacy boundaries of family life, there is a little researched, yet particularly relevant, facet of the phenomenon warranting further investigation: parents' strategies to govern their children's digital footprints. Research has found that children's social media presence may derive both from parents' own sharing behavior and that of subjects external to the nuclear family who share about the child, such as grandparents, uncles, etc. (Cino, in press; Cino & Dalledonne Vandini, 2020; Kumar & Schoenebeck, 2015). Little is known, however, in terms of strategies used by contemporary parents to govern their children's digital identities. Some qualitative findings on the topic show that some parents try to negotiate rules with their children and set boundaries with people external to the nuclear family (Ammari et al., 2015). However, quantitative data specifically looking at the governance strategies used by parents to manage their children's digital footprints within and outside the nuclear family system is currently lacking.

This paper makes a step in this direction by reporting on findings from a survey administered to a sample of 290 parents of children aged 0-12 living in the United States focusing on parents' governance strategies adopted to steward their children's privacy online (Kumar & Schoeneback, 2015). These are framed in terms of intra- and extra-systemic governance with the former aimed at controlling parents' own sharing behavior and the latter the behavior of people from surrounding systems (i.e., relatives). Based on descriptive statistics and results from a series of binary logistic regressions, findings from this study report on factors influencing the adoption of governance strategies for digital-footprint management in the mediatized domestic milieu.

2. Literature review

2.1 Children's digital footprints and representational agency

An important aspect of being a digital citizen concerns the autonomy and capacity to be an active agent when it comes to decide how to craft one's digital narrative. The ability to be at the origin of one's self-representation on social media platforms can be understood in terms of an individual's representational agency. According to Kockelman (2007), representational agency can be defined

> «as the degree to which one can (1) thematize a process (e.g., determine what we talk about), (2) characterize a feature of this theme (e.g., determine what we say regarding what we talk about), and (3) reason with this theme-character relation (e.g., determine what we conclude from, or use to conclude, what we say regarding what we talk about)» (p. 376).

In the realm of social media sharing this means that when sharing something online, the subject whose information is shared about is typically able to decide not only whether, but also how and the extent to which something about him/her is narrated. However, things get more complicated when contents about third parties are posted.

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The peculiarity of sharenting lies on the fact that adults make decisions about children's digital footprints, potentially compromising their representational agency in the process. This seems to be particularly the case with younger children, since as they grow up so does their capacity to negotiate boundaries with parents about their social media presence (Livingstone et al., 2018).

According to Micheli, Lutz and Büchi (2018), digital footprints can be defined as «the aggregate of data derived from the digitally traceable behavior and online presence associated with an individual» (p. 243). The authors argue that data traces posted by someone else about children on social media create a "digital footprint gap" in terms of children's abilities and rights to be in control of their digital traces.

As such, the fact that third parties make details and information about children's lives public caused controversies calling forth responses in terms of parental accountability. In this regard, some academics emphasized how sharing materials about someone else, especially when it comes to minors, may be a violation of their privacy and decisional rights (Bessant, 2017). Children's online agency and privacy rights, however, are tricky in their very own nature since, at least up to the point where children themselves are able to reclaim them, they are dependent on adults. Legal examples of such an ambivalence are the American Children's Online Privacy Protection Act (COPPA) and the European General Data Protection Regulation (GDPR) that although recognizing children's online privacy as a right of public interest still call into play private solutions based on caregivers' responsibility (Macenaite & Kosta, 2017). This makes the governance of children's digital footprints especially challenging, both conceptually and practically (Leaver, 2020; Livingstone, 2018).

Considering the above, some scholars argued that the only way for children's online privacy rights to be respected is to avoid posting about them at all, at least until children are not able to consciously take a position on the matter (Steinberg, 2016). Others, as reported in Siibak and Traks (2019), see in parents' accountability an answer to the problem by asking parents to decide what kind of data of their children, of whatever nature, should end up online on a case-by-case basis.

Circumstances for children's identities to be crafted online, however, stem not only from their parents – who have been defined as the main actors supposed to steward their children's social media presence (Kumar & Schoeneback, 2015) – but also actors from systems surrounding the nuclear family, such as extended family members (Ammari et al., 2015), increasing the opportunities for children to have third parties producing online data about them. This may cause a "double loss of agency" (Cino & Dalledonne Vandini, 2020), where not only children's but also parents' ability to govern their offspring's digital footprints is compromised.

As such, the governance of minors' online identities when they are too young to give their consent is a complex process calling into play strategies to manage both the sharing behavior of people from the nuclear family system (i.e., parents) and extra-familiar systems (e.g., relatives).

2.2 Parents' privacy-protective behaviors in the digital home

The notion that parents generally do not care about their children's digital footprints, although quite extensively proposed by media outlets, is actually problematic (Barassi, 2020). Findings from qualitative studies in fact show that several parents do in fact care about the long-term effects of their own sharing behavior and try to adjust it accordingly (Blum-Ross & Livingstone, 2017; Chalklen & Anderson, 2017) while also struggling

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to have other people respecting their privacy wishes so to govern the sharing of information and pictures of their children on social media by third parties (Ammari et al., 2015). Quantitative evidence further supports that parents' privacy concern do in fact influence their sharenting behavior (Ranzini et al., 2020). Little research, however, has investigated quantitatively precisely the governance strategies parents put in place so to control their children's online identities and how these relate to parents' attitudes and beliefs on children's digital footprints, especially when they still don't have much of a say in the process.

In this regard, to regulate their own sharing behavior parents may adopt several strategies, such as using specific privacy settings, asking for their children consent before posting, deleting something they have already posted if they think this could be detrimental for their children, or sharing on more "private" platforms to contain the diffusion of information about their children (Cino, in press). When it comes to regulate the behavior of people from external systems such as extended family members, on the other hand, parents may set rules on what they can post or not on social media (Ammari et al., 2015).

3. The present study: investigating factors shaping parents' governance strategies

The purpose of this study is to investigate parents' sharing habits and opinions on children's social media presence and what kind of variables may influence the governance strategies described above.

Looking at the literature, some evidence suggests not only that mothers share more, but also do most of the disclosing-management work in the family, being the ones who most set rules for themselves and people external to the nuclear family to respect, so to steward their children's online presence (Ammari et al., 2015; Kumar & Schoeneback, 2015). Additionally, parents' sharing habits seem to decrease as children grow into adolescence, which may be due to the fact that they are more in control of their online identities (Livingstone et al., 2018). Research, however, also shows that older children are actually more okay than younger ones with parents sharing about them (Sarkadi et al., 2020), posing the question of how parents regulate and adjust their sharing behavior depending on their children's age. Parents who do recognize their children's agency may indeed want to control how much digital footprints of their children is online so to respect their representational autonomy.

Historically, the governance of the relationship between children and the internet has always been inspired by broader discourses on online risks that parents are supposed to prevent (Wartella & Jennings, 2001), and digital risks concerns tend to motivate parents to mediate their children's internet use (Mascheroni & Ólafsson, 2014). Similarly, parents who adopt governance strategies can also be guided by digital risk concerns, leading parents to adjust their own behavior or control that of others to prevent risky situations to occur (Cino, in press).

Privacy protective behaviors, however, are generally reliant on one's trust in privacy itself. Some people in fact believe that it is not possible to prevent privacy violations, experiencing a form of privacy apathy (Hargittai & Marwick, 2016), which in the case of children's social media presence may have parents feel like trying to manage their digital footprints is pointless. Finally, people may decide to adjust their sharing behavior ex-post, by deleting something they had posted online, engaging in a process of "scrubbing" (Child et al., 2017)

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through which parents may attempt to recalibrate the amount of information posted out there about their children.

When it comes to governing the behavior of people external to the nuclear family, though, these strategies may have to do with the feeling of having one's child's privacy boundaries violated. Episodes of boundary violations, however, are not objective since different people evaluate same circumstances differently when it comes to boundary crossing (Petronio, 2002). As such, adopting certain rules with certain group of people may depend on the extent to which parents deem acceptable for other people to share about their children with no consent.

Against this background, the present study seeks to investigate parents' sharing habits and opinions about their children's digital footprints, and what variables predict the adoption of intra- and extra-systemic governance strategies by parents to manage them, here intended as a proxy for social media literacy, referring to parents' knowledge and abilities to govern potential online risks for their children (Barnes & Potter, 2020; Daneels & Vanwynsberghe, 2017).

In this paper we define as *intra-systemic governance strategies* privacy-management behaviors aimed at controlling and regulating parents' sharenting practices within the nuclear family system (by using privacy settings, asking children for consent before posting, deleting something that has already been shared, or adopting alternative ways of sharing instead of posting on their social media accounts). *Extra-systemic governance strategies*, in turn, concern setting rules with people from external systems (i.e., extended family members) who post or may post about children by setting privacy rules, clarifying whether and how they can share about children on their personal social media accounts.

As such, the present investigation is guided by the following research questions:

RQ_1: What are parents' digital habits and opinions about their children' social media presence?

RQ_2: What factors shape the adoption of intra- and extra-systemic governance strategies by parents to manage their children's digital footprints?

3.1 Method and sample

To address these questions, a survey was administered to a sample of 290 parents living in the United States of children aged 0-12 through a SurveyMonkey census balanced panel in terms of gender and age. The rationale behind focusing on this age range for children lies in the fact that, at least formally, children under the age of 13 are not allowed to own a social media profile. As such, we wanted to investigate parents' governance strategies when their children are not formally allowed to construct their digital identities autonomously yet, so to explore how parents govern this process.

Before administering the survey to the final sample, a pilot test was run with a convenience sample of 27 parents reflecting our inclusion criteria (with women, however, being oversampled compared to men – 22 mothers, 5 fathers), to investigate the comprehensibility of the instrument and adjust the items accordingly.

With respect to the final sample, of the 290 final respondents, 59% identified as women and 41% as men, with a mean age of 35.83 years (*SD*= 8.87). Children's age ranged from less than one year to 12, with a mean age of

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5.05 (SD= 3.79). Sixty-three percent of the sample identified as White, 16% as Hispanic/Latino, 9% as Asian, 7% as African American, 3% as American Indian, and the remaining part as "other".
Sixty-six percent of the sample holds a high school diploma, 29% a university degree, and 5% less than a high school diploma.

3.2 Measures and variables

Parents were asked about their own sharing behavior and that of people from external systems surrounding the child (i.e., relatives), their opinions about the construction of their children's social media presence, as well as governance strategies adopted to manage it.
Main independent variables considered for the purpose of this paper to investigate their role as potential factors in shaping parents' privacy-protective behaviors were: parents' gender, age, education, and sharenting frequency; children's age; parents' digital risk concern; parents' stance in terms of recognizing children's representational agency, privacy apathy, and acceptance for extended family members sharing about the child. Independent variables were measured as follow:

- *Parents' and children's demographics* were measured by asking respondents about their gender, their own and children's age, and highest level of education attained at the time of the survey.
- *Parents' sharenting frequency* was measured by asking parents to indicate the number of pictures posted in the past month.
- *Recognition of children's agency* was measured through an item parents could select among a list of other items they could agree with, stating "I don't feel like as a parent I am supposed to be in charge of my child's social media presence".
- *Digital risk concern* was measured by asking parents "How concerned are you any of this would happen as a result of posting about your child/children on social media?". Parents were asked to indicate their degree of concern with respect to four items informed by common online risks children's online presence may cause and that also speak for broader imaginaries on the perils of the internet that influence or at least inform parenting digital practices (Livingstone & Stoilova, 2021). These potential risks were adapted to children's passive online presence taking place when adults craft their digital identities. In other words, they were considered as stemming from other people's behavior with respect to children's contents posted online. The four items concerned: "digital kidnapping (when a stranger steals a minor's photo from the internet and posts the photo as if it's their own)"; "someone bullies your child/children or makes fun of him/her/them because of the content posted online"; someone convert the picture into child pornography"; and "data about your child be collected and used by corporations". Parents responded using a 5-point Likert-type scale from 1 (not at all concerned) to 5 (extremely concerned). The four items were computed into a scale, with acceptable levels of internal consistency (Cronbach's α= .78).
- *Privacy apathy* was measured through an item parents could select among a list of other items they could agree with stating, "I feel like wanting to prevent children's social media presence is pointless these days as everything is recorded anyway".

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- *Levels of acceptance for extended family members sharing about the child* was measured asking parents: "Do you find it acceptable for other family members to take pictures of your child/children and share them on social media without asking you first?". Parents responded using a 5-point Likert-type scale from 1 (totally unacceptable) to 5 (perfectly acceptable). Mean score was calculated.

Dependent variables considered in this work were strategies of intra- and extra-systemic governance. Intra-systemic governance strategies include:

- *Using privacy settings*, which was measured by asking parents "What privacy settings do you have in place on your social media account when posting about your child/children? (Refer to the platform you use the most to share about your child)". Response options included: "Open (everyone, friends and not friends can see what I post)"; "Closed (only friends can see what I post)"; "I have specific groups of people that can see what I post about my child, while others can't"; and "Other (please, specify)".
- *Asking children's for permission before posting about them*, which was measured asking parents "Have you ever asked for your child/children's permission before posting about him/her/them?". Response options included: "Yes"; "No"; "My child/children in the 0-12 age range are still too young to have this conversation (please indicate the age)". When selecting this last option, parents were asked to specify the age of the child. However, for the purpose of the analysis these responses were excluded since these parents believed their children were too young to be asked for consent.
- *Post scrubbing* (as in Child et al., 2017), as the act of removing contents about one's child already posted, measured by asking parents through a binary question "Have you ever deleted a social media post about your child/children?".
- *Alternative ways of sharing*, by asking parents through a binary question: "Have you ever used any app/website/service other than your social media account to share photos and videos of your children privately with a selective audience (e.g., TinyBeans)?".

Extra-systemic governance strategies included:

- *Setting rules with extended family members* on whether and how to post about children on social media, measured through a question asking: "Have you set any rule with extended family members about sharing of your child on their social media accounts?". Response options were: "Yes, the rule was they have to ask us first before sharing"; "Yes, the rule was they cannot share at all"; and "No".

3.3 Data analysis

Descriptive statistics were calculated to investigate parent's sharing habits and opinions on children's social media presence. Five logistic regressions were run to investigate possible predictors of intra- and extra-systemic governance strategies.

The first four logistic regressions concerned intra-systemic governance strategies and have to do with parents managing their own sharing behavior with respect to: using privacy settings when posting about their children, asking for their children's permission before posting, post scrubbing, and employing alternative ways of sharing. Independent variables included in the models were: parents' gender, age, level of education, number

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of pictures posted in the past month, children's age, digital risk concern, recognition of children's agency, and privacy apathy.
The fifth logistic regression concerned extra-systemic governance strategies and has to do with setting rules with extended family members. Independent variables included in the model were: parents' gender, age, level of education, level of acceptance for extended family posting about the child, children's age, digital risk concern, recognition of children's agency, and privacy apathy.

4. Results

We first report on descriptive statistics about parents' sharing habits, to then focus on predictors of intra- and extra-systemic governance strategies.

4.1 Parents' sharenting habits and opinions

Most parents in our sample (92%) reported having at least a social media account, with the top three platforms used being Facebook (93%), Instagram (72%) and Snapchat (48%). Of these parents (N= 274), most of respondents (84%) are frequent users, accessing their social media accounts daily. Sharenting is a pretty common practice, with 90% of parents reporting they shared about their children on social media at least once, and 75% doing this regularly in the span of a month. The average number of contents (photos and videos) shared in the previous month was 12.47 (SD= 40.24). Consistent with their own social media use, the top three platforms used by parents to share about their children were Facebook (92%), Instagram (54%), and Snapchat (28%). Chi-square and independent t-test analyses showed no significance differences between mothers and fathers with respect to practicing sharenting at all, $\chi^2(1, N = 274) = 1.598$, $p= .206$, nor in terms of number of posted photos and videos of their children, $t(240)= -.219$, $p= .943$.
When it comes to parents' opinions on sharenting, only 9% of the sample doesn't feel like they are supposed to decide about their children's social media presence, while the remaining 91% feels differently about it. Similarly, 10% expressed some form of privacy apathy, believing that wanting to prevent children's social media presence is pointless these days. With respect to parents' worries about potential risks stemming from their children's social media presence, parents reported to be somewhat to extremely concerned about pictures of their children being converted in child pornography (50%), data about their children being collected and used by corporations (49%), digital kidnapping (45%), and that someone could bully or make fun of their children because of the content posted (41%). Mean score for the whole digital risk concern scale, summing up these four areas of concern, was 2.84 (*SD*= 1.01). Parents were further asked whether they were on the same page with their partner/ex-partner/someone else taking care of the child about sharenting, with 67% of respondents reporting they were, 6% they were not, 10% not always, 12% never talked about it, and the remaining 4% not having any partner/ex-partner or person helping taking care of the child to discuss the matter with. For this paper, analyses concerning intra-systemic governance strategies were run only considering those parents who share (N= 247), while for extra-systemic strategies the whole sample was considered.

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4.2 Parents' intra-systemic governance strategies

Four binary logistic regressions were run to investigate possible predictors of parents' intra-systemic governance strategies with respect to using privacy settings in the social media they use the most to share about their children, asking for children's permission, deleting something previously posted about their children (post scrubbing), and using alternative ways of sharing to post about one's child.

With respect to privacy settings, 12% of respondents have set their profile on "open", meaning that anyone can see what they post despite being friends or followers, while 78% had a closed profile where all their friends or followers can see what they post, and 10% adjust their settings according to what they post, selecting specific people who can see what they share about their kids. Nobody selected the "other" option. For our logistic regression analysis, this variable was recoded binarily as "At least some privacy settings used/ No privacy settings at all/", including in the first option both those who have a closed profile and those who manually select the pool of people who can see their children's contents, since this indicates a form of governance to prevent context collapse (Marwick & Boyd, 2011). Surprisingly, findings from the analysis revealed no significant predictors of adopting some sort of privacy settings among the independent variables included in our model (Table 1). The model explained in fact less than 10% of the variance (Nagelkerke R^2).

When it comes to asking for children's permission, only 28% of respondents ever did it, while 43% never asked, and 29% thought their children were too young to give their consent. This latter group of parents was asked to indicate exactly the age of their children they deemed too young to be consulted, with children's age covering the whole 0-12 range. For the logistic regression these responses were excluded since these parents believed their children were too young to be asked for consent. As for predictors (Table 2), the analysis found significant effects only of child's agency (p= 0.14), showing that parents who think they should not make decisions for their children's identities were more likely to ask for permission before posting. The model explained 10% of the variance (Nagelkerke R^2).

As for post scrubbing, or the act of deleting something previously shared about one's child, 32% adopted this strategy. The analysis (Table 3) found significant effects of number of posted photos (p= .014) and child's agency (p= .002), showing that parents who share more and believe they should not decide about their children's digital presence were more likely to retroactively adjust their sharing behavior. The model explained 29% of the variance (Nagelkerke R^2). This strategy was further investigated by asking parents to select from of a series of items all of those reflecting why they deleted something. The most selected reasons were that parents thought the post was exposing too much information about their children (41%), their children were not happy about the post and asked them to remove it (31%), parents feared the post could be embarrassing for their children (29%), or as a request from their partner/ex-partner or significant person taking care of the child (27%). Overall, two main patterns of scrubbing can be identified: *self-directed scrubbing*, where parents themselves decide to remove something, and *other-directed scrubbing*, where the deletion takes place because of someone else, either the child or a caregiver, requests to do so.

Finally, considering the adoption of alternative ways of sharing, only 17% of respondents used some app/website/service other than their social media accounts to share photos and videos of their children pri-

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vately with a selective audience. The analysis (Table 4) showed that the only significant predictor of this strategy was, once again, child's agency (p= <.001). The model explained 26% of the variance (Nagelkerke R^2). Overall, child's agency was the most consistent predictor of the adoption of intra-systemic strategies, while no effects of parents' gender, age, level of education, nor children's age, digital risk concern and privacy apathy were found.

	B	**S.E.**	**Wald $\chi^2(df)$**	***p***	**O.R.**
Parent's gender					
Woman	1.103	.626	3.110 (1)	.078	3.014
Man (Ref. Cat.)	0				1
Parent's age	.017	.038	.190 (1)	.663	1.017
Parent's education			1.143 (2)	.565	
Less high school	1.318	1.297	1.033 (1)	.310	3.737
High school diploma	.999	1.331	.563 (1)	.453	2.715
University degree (Ref. Cat.)	0				1
Number of photos	-.001	.007	.006 (1)	.939	.999
Child's age	-.052	.085	.383 (1)	.536	.949
Digital risk concern	-.110	.304	.132 (1)	.717	.896
Child's agency	.633	1.096	.334 (1)	.564	1.884
Privacy apathy	.015	1.172	.000 (1)	.989	1.016
Constant	.357	2.252	.025 (1)	.874	1.430

Table 1: Logistic regression exploring possible predictors of using privacy settings (Nagelkerke R2= .071)

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	B	S.E.	Wald $\chi^2(df)$	*p*	O.R.
Parent's gender					
Woman	.511	.518	.971 (1)	.324	1.667
Man (Ref. Cat.)	0				1
Parent's age	.009	.029	.090 (1)	.764	1.009
Parent's education			.561 (2)	.756	
Less high school	1.110	1.497	.549 (1)	.459	3.003
High school diploma	.125	.498	.063 (1)	.802	1.133
University degree (Ref. Cat.)	0				1
Number of photos	.000	.005	.001 (1)	.981	1.000
Child's age	.009	.064	.019 (1)	.891	1.009
Digital risk concern	.085	.247	.117 (1)	.732	1.088
Child's agency	1.592	.646	6.066 (1)	.014	4.911
Privacy apathy	.726	.975	.554 (1)	.457	2.066
Constant	-2.034	1.550	1.723 (1)	.189	.131

Table 2: Logistic regression exploring possible predictors of asking for children's permission (Nagelkerke R2= .105)

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	B	S.E.	Wald $\chi^2(df)$	*p*	O.R.
Parent's gender					
Woman	.739	.552	1.792 (1)	.181	2.095
Man (Ref. Cat.)	0				1
Parent's age	.007	.030	.047 (1)	.829	1.007
Parent's education			.116 (2)	.944	
Less high school	-20.3	18387.3	.000 (1)	.999	.000
High school diploma	.172	.506	.116 (1)	.733	1.188
University degree (Ref. Cat.)	0				1
Number of photos	.045	.018	6.097 (1)	.014	1.046
Child's age	.016	.065	.058 (1)	.809	1.016
Digital risk concern	.264	.241	1.205 (1)	.272	1.303
Child's agency	2.221	.700	10.068 (1)	.002	9.213
Privacy apathy	-.081	.969	.007 (1)	.933	.922
Constant	-3.451	1.485	5.397 (1)	.020	.032

Table 3: Logistic regression exploring possible predictors of post scrubbing (Nagelkerke R2= .295)

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	B	S.E.	Wald $\chi^2(df)$	*p*	O.R.
Parent's gender					
Woman	.475	.678	.490 (1)	.484	1.607
Man (Ref. Cat.)	0				1
Parent's age	.039	.036	1.166 (1)	.280	1.040
Parent's education			1.320 (2)	.517	
Less high school	.348	1.367	.065 (1)	.799	1.416
High school diploma	-.611	.600	1.040 (1)	.308	.543
University degree (Ref. Cat.)	0				1
Number of photos	.020	.014	2.060 (1)	.151	1.020
Child's age	.032	.079	.159 (1)	.690	1.032
Digital risk concern	.079	.299	.070 (1)	.791	1.082
Child's agency	2.368	.662	12.792 (1)	.000	10.678
Privacy apathy	.268	1.241	.047 (1)	.829	1.307
Constant	-4.302	1.800	5.711 (1)	.017	.014

Table 4: Logistic regression exploring possible predictors of alternative ways of sharing (Nagelkerke R2= .265)

4.3 Parents' extra-systemic governance strategies

An additional binary logistic regression was run to investigate possible predictors of parents' extra-systemic governance strategies, here intended as forms of inter-systemic boundary coordination between the nuclear and the extended family (Petronio, 2002), to explore parents' adoption of rules with extended family members to manage whether and how they can share about their children on social media.

Thirty-eight percent of respondents reported they had set some rule with extended family members about sharing of their children on their personal social media accounts (30.8% requested to ask them for permission before sharing, 7.27% not to share at all), while the remaining 62% did not set any rule. Sixty-eight percent of parents reported that some of their extended family members shared at least once about their children. Of these, 24% stated they asked for permission before, 56% that their relatives did not ask for consent but parents themselves had not set any rule before, 8% that relatives shared violating explicitly established rules, and the remaining 12% that their relatives did not always ask for consent. Forty-one percent of parents deemed unacceptable for extended family members to share about their children without asking first, while 38% believes it is acceptable, and the remaining 21% is neutral about it.

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The logistic regression analysis (Table 5) found that gender (p= .038), parents' acceptance for extended family members sharing about their children (p= <.001), digital risk concern (p= .018), and child's agency (p= .045) were all significant predictors of setting family rules. Specifically, being a woman, not accepting extended family members sharing about one's child, reporting higher levels of digital risk concern, and believing in respecting children's representational agency increase the chances of adopting extra-systemic governance strategies. The model explained 33% of the variance (Nagelkerke R^2).

	B	S.E.	Wald $\chi^2(df)$	p	O.R.
Parent's gender					
Woman	1.075	.518	4.306 (1)	.038	2.931
Man (Ref. Cat.)	0				1
Parent's age	.027	.029	.823 (1)	.364	1.027
Parent's education			2.718 (2)	.257	
Less high school	1.045	1.440	.526 (1)	.468	2.843
High school diploma	-.638	.483	1.747 (1)	.186	.529
University degree (Ref. Cat.)	0				1
Ext fam acceptance	.499	.143	12.156 (1)	.000	1.647
Child's age	.083	.070	1.396 (1)	.237	1.086
Digital risk concern	.560	.236	5.602 (1)	.018	1.750
Child's agency	1.486	.743	4.002 (1)	.045	4.420
Privacy apathy	.148	1.179	.016 (1)	.900	1.159
Constant	-5.890	1.650	12.740(1)	.000	.003

Table 5: Logistic regression exploring possible predictors of setting family rules (Nagelkerke R2= .338)

5. Discussions and conclusions

Children's social media presence is quite normalized today, with both parents and other extended family members contributing to the construction of a child's digital footprint (Cino & Dalledonne Vandini, 2020). In this context, parents have been called upon as the gatekeepers of their children's digital traces (Steinberg, 2016), meaning that they are socially expected to be responsible to govern them. This paper sought to investigate what parents' digital habits and opinions about their children's social media presence are, and what factors shape the adoption of intra- and extra-systemic governance strategies to manage their children's digital

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footprints, here intended as approaches to regulate both their own sharing behavior and that of extended family members.

Findings show that sharing about children on social media is a very common habit for this sample of parents, and that only a minority of respondents believe they should not be making decisions about their children's digital footprints but let them decide autonomously. Almost half of the sample, however, reported some sort of concern with respect to a plethora of risks that may stem from posting about a child, such as pictures being converted into child pornography, data being collected and used by corporations, digital kidnapping, and bullying. This finding is in line with the privacy-openness paradox (Chalklen & Anderson, 2017), according to which parents still engage in some sort of sharing behavior even though they're worried about potential risks and long-term ramifications, due both to the benefits associated with sharing online and more generally online sharing being taken for granted and normalized. At the same time, only a minority of parents reported feelings of privacy apathy (Hargittai & Marwick, 2016), indicating that most of our respondents do not feel like taking measures to protect their children's social media presence would be pointless.

When it comes to governance strategies -here intended as a proxy for digital literacy- it is striking to notice that most of the time these only concern a minority of parents, this being true for four of the five governance strategies here explored. This is relevant, because if it is true that not all parents are inattentive about their children's digital traces, most of them do not adopt privacy-protective behaviors, showing a potential area of educational interventions.

With respect to intra-systemic strategies, it is first interesting to notice that although most parents do, in fact, use some privacy settings in the social media account they use the most to post about their children, none of the predictors included in our model were significant in explaining this strategy. While this is an interesting area for future inquiry to look at, it may be the case that because parents' social media can be used to share about many other aspects of their personal lives, our child-centered analytic approach is not enough to explain the broader use of a platform by a parent. It is however important to stress that though not knowing what variables relate to this specific behavior, only a minority of parents post about their children with no form of audience control at all.

When it comes to other inter-systemic strategies, asking for children's permission was not a common solution in our sample, concerning less than three parents in ten. Interestingly, 29% of respondents believed their children were too young to give their consent, but when asked about their children's age this ranged from 0 to 12. While one can argue that it may be difficult for preschoolers to understand the ramification of their parents' sharing behavior, evidence from children aged 4-15 showed that, contrary to what one may expect, the youngest the child the least acceptable it was for him/her to have their parents taking and sharing pictures of them online (Sarkadi et al., 2020), echoing research showing that children would generally like to be consulted by their parents before posting (Lipu & Siibak, 2019). When considering those who actually asked their children for permission, the only significant predictor was recognizing children's agency. Which is to say that those parents who believe they should not make decisions for their children's online presence were more likely to consult them.

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Recognizing a child's representational agency would also increase the chances for a parent to engage in post scrubbing (Child et al., 2017). Deleting something posted about one's child is also more common for those parents who share more. This finding contrasts with the idea that parents who share more are necessarily less attentive about their children's privacy. In turn, it may be assumed that by sharing more some parents may become more reflective about their online behavior and the digital traces they are leaving behind for their children, increasing the chances to regret or at least reconsider what they had posted online. Future research should build on these findings to better explore how the self- and other-directed forms of scrubbing are enacted in sharenting and further investigate what led parents to revisit their sharing behavior, and what conversations parents had not only with their children, but also partners or caregivers of the child. While research has investigated how parents and children negotiate boundary rules in sharenting (Verswijvel et al., 2019), little is known in fact on how children's caregivers negotiate what can be posted online about their children and possible conflicts arising from different views. Our findings provide some hints, showing that most of the time parents are on the same page with their partners/ex-partners in deciding whether and how to share about children, with some parents also engaging in post-scrubbing as a request from their partners/ex-partners. More research however is warranted to better investigate this aspect and how it influences intra-systemic governance strategies considering not only the parent as a single individual but as a potential member of a triad including both parents (or another significant adult, if present) and the child.

As for adopting alternative ways of sharing, such as using apps/websites/services other than their social media accounts to share about their children privately with a selective audience, this solution was a prerogative of only 17% of parents, but, once again, recognizing children's agency was the only significant predictor, showing that –apart from using privacy settings– when parents do not feel entitled to make decisions about their children, they are also more likely to adopt intra-systemic governance strategies that may recalibrate agency and privacy rights in the digital home.

It is interesting to notice though that none of the other variables included in the model were significant. No interactions of parents' gender, age, and level of education were found, nor of children's age, digital risk concern and privacy apathy. Previous research, in turn, suggested that mothers are generally the ones who tend to decide how to manage their children's social media presence (Ammari et al., 2015), but this was not supported by our findings, either because of the specific governance strategies we investigated, or maybe due to a lack of gender differences in the practice. Similarly, while some differences could be expected in terms of parents' age, since younger parents seems to be more attuned to digital technology use (Bartholomew et al., 2012), these were not found, nor significant differences emerged in terms of parents' level of education, even though more educated people tend to have more digital skills and adopt more privacy-protective behaviors (Büchi et al., 2017). As for children's age, although previous research show that sharenting has an inverse relationship with a child's age (Livingstone et al., 2018), our data do not show any relationship with the adoption of specific governance strategies, suggesting that chances for parents to engage in some protective behaviors do not change during a child's life span. Even privacy apathy did not predict any governance strategy, against the belief that feeling like governing children's digital footprints is not feasible may have parents feel less prone to try, contrary to what previous research with young adults revealed (Hargittai & Marwick, 2016). What is most surpris-

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ing, though, is that digital risk concern does not influence parents' sharing behavior. While worries about the perils of the internet are generally important drivers for parental mediation strategies (Mascheroni & Ólafsson, 2014), this seems not to be the case in our data.

Things change, however, when looking at parents' extra-systemic governance strategies. Consistent with previous literature, mothers are more likely to set rules with extended family members (Ammari et al., 2015). Recognizing a child's agency continues to be an important predictor of managing children's digital identities, indicating that when parents feel like they should not make autonomous decisions on their children's digital footprints this also applies to third parties. Interestingly, in this case higher levels of digital risk concerns do predict higher chances of setting rules with extended family members. It may be the case that while parents feel overall confident about their own sharing habits and who they are interacting with when posting, the idea of losing this control because of someone else posting about their children may increase the perception of potential risks their children may come across. This finding is in line with previous scholarship showing how when third parties share about children, parents feel a lack of control over this representation causing anxiety (Cino & Dalledonne Vandini, 2020). Finally, the most significant predictor of extra-systemic governance is, however, the level of acceptance for extended family members sharing about children. This is consistent with the fact that occurrences of privacy violation and boundary crossing are not objective but depends on how people read a certain situation and several situational and contextual factors (such as who is revealing a certain information, how, etc., Petronio, 2002), influencing whether and how parents adopt governance rules.

Although providing a plethora of information on how parents govern their children's digital footprints, this paper was limited in scale and scope. The sample was in fact relatively small. Also, several variables would benefit of a more thorough investigation, such as recognizing children's agency and privacy apathy. Future research may build on that to create proper scales measuring different gradations of how parents understand their children's representational agency and what their privacy perceptions are when it comes to governing the offspring's digital footprints. The quantitative approach taken in this study, while needed to complement an area of inquiry that so far has mostly relied on qualitative findings in terms of governance strategies, could very well be implemented in the future by opting for a mixed design, so to better investigate both parents' and children's representations in terms of crafting minor's digital identities.

Despite their limitations, findings from this study are relevant not only to inform scholars to better investigate the relationship between further variables that influence parents' governance strategies, but also educational practitioners to think about media education interventions to promote parents' digital literacy so to better orient their efforts and adopt effective strategies to promote their children's representational agency and (digital) rights in an ever-evolving mediatized ecology. We contend that involving children in this process would be crucial, since research show they tend to have expectations in terms of how people around them respect interpersonal privacy and agency (Stoilova et al., 2020). Hearing their voices could in fact allow for a process of awareness through which adults may realize children's desire for representational agency. On this regard, it is pivotal to notice how when their agency is considered parents tend to do something to regulate both their own and other people's sharing behavior. As we have seen, however, this only concerns a minority of respondents, consistent with previous research showing that privacy-protective behaviors are an indicator of digital literacy

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which is unequally distributed among parents (Barnes & Potter, 2020). Findings from this study could then inform digital literacy workshops and interventions moving beyond children's own digital media use, focusing instead on the whole family as a system (Lòpez et al., 2017). Or, in other terms, recognizing that media use concerns to different degrees every member of the family, although the extent to which each subject participates may differ greatly. This is particularly the case for a media practice like sharenting, which however could become a subject of discussion and reflection for parents and children, supporting the acquisition of multiple and differentiated skills concerning not only privacy management, but also communication and socio-emotional skills (Romero, 2014), being sharenting an emotionally-laden practice (Cino et al., 2020). This is important to avoid narrowing the focus only on matters concerning privacy, to better understand other socio-emotional implications of crafting and creating a digital identity online, for oneself and for one's child. We finally contend for the need for educational interventions moving beyond normative accounts, aimed at fostering reflexivity with respect to a mundane and taken-for-granted media practice that media education can make more deliberate and conscious for families as a whole in the digital age.

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Davide Cino, Ph.D, PhD, is a Postdoctoral Researcher at the Università Cattolica del Sacro Cuore, Milano. His main research interests concern children's online presence, digital skills, and digital parenting, which he studies employing different methodologies and through an interdisciplinary lens.
Contact: davide.cino@unicatt.it

Ellen Wartella is the Sheikh Hamad bin Khalifa Al-Thani Professor of Communication, Professor of Psychology, Professor of Human Development and Social Policy, and Professor of Medical Social Sciences at Northwestern University. She also directs the Center on Media and Human Development at Northwestern University. She is a leading international scholar of the role of media in children's development.
Contact: ellen-wartella@northwestern.edu

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