

Understanding and Supporting Fathers and Fatherhood on Social Media Sites

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ABSTRACT

Fathers are taking on more childcare and household responsibilities than they used to and many non-profit and government organizations have pushed for changes in policies to support fathers. Despite this effort, little research has explored how fathers go online related to their roles as fathers. Drawing on an interview study with 37 fathers, we find that they use social media to document and archive fatherhood, learn how to be a father, and access social support. They also go online to support diverse family needs, such as single fathers' use of Reddit instead of Facebook, fathers raised by single mothers' search for role models online, and stay-at-home fathers' use of father blogs. However, fathers are constrained by privacy concerns and perceptions of judgment relating to sharing content online about their children. Drawing on theories of fatherhood, we present theoretical and design ideas for designing online spaces to better support fathers and fatherhood. We conclude with a call for a research agenda to support fathers online.

Author Keywords

Fathers; social media; Internet; parents.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

Since 2012, fathers have gathered at the Dad 2.0 Summit, an annual conference for father bloggers to interact with one another and with marketers and advertisers [40]. Following in the footsteps of Mom 2.0, founded in 2008, Dad 2.0 has brought mainstream attention to the growing presence of fathers and fathering online. These fathers are actively involved in raising their children and tend to despise the consumer marketing-perpetuated trope of the “hapless, bumbling” father [40]. As a result of their online

activism, major companies like Huggies have pulled advertisements that discredited fathers, usually after facing online backlash [46]. Despite fathers' active engagement on sites like Facebook, Twitter, Blogger, and Reddit [7,30], little research has investigated what they are doing and why. HCI research in particular has focused on mothers in recent years [5,17,32,39], but fathers remain overlooked. Furthermore, while extensive research has documented online behavior on sites like Facebook, it is not known to what extent this resonates with fathers' experiences.

This paper argues that we are at a critical juncture for studying and promoting fatherhood. Fathers' roles have steadily evolved over time from moral mentor and breadwinner to caregiver and emotional supporter [18,44]. Though still imbalanced with mothers, fathers take on more childcare and household responsibilities than they used to [24]. Problematically, the focus on mothers and motherhood in academic research could inadvertently perpetuate the unequal focus on mothers as primary caregivers—undercutting some of the very premises motherhood research is looking to address. The Internet offers a promising platform for supporting fathers and fatherhood, an area we explore in this work.

We conducted an interview study with 37 fathers about their family life, their roles as fathers, and their Internet use as it relates to fatherhood. We find that fathers have a variety of motivations for using social media, which vary according to the particular settings and context of their family life. These include documenting and archiving fatherhood, learning how to be a father, and accessing social support—including emotional support—from other fathers. However, they are inhibited by perceptions of judgment and stigma, and they express privacy concerns about sharing online. Drawing on prior work on the social construction of fatherhood and determinants of involved fathers, we present theoretical and design ideas to demonstrate how online platforms might be better designed to support fathers. We conclude with a call for more research toward understanding the lives of fathers and for leveraging technology to promote equity among parents.

RELATED WORK

We draw on theories about the social construction of fatherhood, what factors correspond to involved fathers, and prior work on parents online. We also describe differences between mothers and fathers online and offline.

Throughout, we consider what prior work and our own studies mean for diverse families beyond a typical two-parent household that has often been assumed in studies of the family. This approach builds on a CHI 2013 workshop that explored what it means to design for diverse family structures and which advocated for more research towards this goal [23].

Social Construction of Fatherhood

Traditional perspectives on fatherhood have defined fathers as authority figures, breadwinners, and emotionally distant [29]. Fathers were expected to play an instrumental role in the family, ensuring the family was taken care of and order was kept; in contrast, mothers were expected to play the expressive role, nurturing the emotional wellbeing and development of the family [19,44]. Feminist movements uprooted these notions, advocating for equality in the workplace, and in the home in terms of childcare and household responsibilities. Notions of “new fatherhood” reflect changes in household behavior and expectations about how fathers should behave [18]; indeed, the amount of work fathers do at home has increased, though imbalances still exist [24]. However, change has been slow, in part because cultural products (e.g., laws and norms for paternity leave in most countries) tend to be conservative in their representations, reinforcing existing stereotypes rather than innovating in representations of gender relations [18].

One framework for understanding how we might promote new kinds of notions of fatherhood is the concept of schemas. Schemas are information structures in memory that help people to organize past experiences and to respond to new situations [3]. Schemas can refer to stereotypes about how people behave (e.g., mothers stay home to raise children), scripts that contain a set of expectations about what will happen (e.g., parents will take their children to a restaurant and order from a children’s menu), social roles (e.g., mothers feel that they *should* stay home to raise a child), or worldviews (e.g., families where a parent stays home to raise the child will do better at raising their children) [8,19,38]. Parenting schemas in particular refer to conceptions about the caregiving role and how to function in that role, conceptions of a child (i.e., how they should develop), and conceptions about one’s own child in particular [3]. Parenting schemas help parents to process information about how they have behaved in the past and how they might behave in the future.

However, the roles of fathers and fatherhood are slow-changing, and fathers may be stuck in an overly rigid or poorly formed schema about how they should act. Fatherhood schemas are shaped by individual experiences parents have in their own families, by ongoing interactions with other people in their lives, and most importantly, the socially constructed roles which guide how parents do or should behave. However, many schemas are adaptive and flexible and can help parents identify problems when they happen [3]. Developing schemas about what it means to be

a good father requires understanding the components of involved fathers and fathering. In this work, we explore how fathers turn to social media sites to explore, learn, and reconsider their existing conceptions of fatherhood.

Determinants of Involved Fathers

To understand fatherhood, it is useful to reflect on what it means to be an “involved father”, a term used by major government and non-profit initiatives for fathers. Lamb, a preeminent fatherhood scholar, proposes four areas for measuring father involvement: motivation, skills and self-confidence, social support, and institutional practices [28].

Motivation is shaped by fathers’ conceptions of fatherhood based on cultural background, current social conditions, and upbringing [28]. Some factors correlate to increased involvement, including class (lower class fathers spend more time with their children), age (fathers spend more time with younger children), child’s gender (fathers spend more time with male children), and maternal employment (fathers spend more time with children if their partner is employed) [28]. However, fathers may also be motivated by peer or societal pressure to be active in their children’s lives, or they may seek to overcome a lack of such involvement from their own fathers [20,43]. Even if fathers are motivated to be involved in their children’s lives, they may be limited by real or perceived lack of skills. Both mothers and fathers develop skills “on the job” [27] and they learn about parenting from the people around them, through their own experiences as children, and through social learning processes by observing other parents [6].

Though little evidence suggests that fathers are differently-abled than mothers at child-rearing, if they are denied exposure (e.g., babysitting as a teenager), they may be socialized to feel less competent as adults. Father involvement requires a supportive network of friends, work colleagues, and family [26,27]. While most industrialized societies today advocate for high father involvement in family life, both mothers and fathers experience employment pressure related to child-rearing, and mothers have been consistently shown to pay an extra penalty in the workplace [9]. Institutional barriers to involved fatherhood also persist. In particular, many companies offer little or no paternity leave to fathers, and where companies do offer paternity leave, social norms may inhibit fathers from actually taking the leave [35]. However, there is a growing body of government and non-profit organizations dedicated to supporting fathers, such as the National Fatherhood Initiative [11,33] in the U.S. and the Fatherhood Institute [14] in the UK. This research builds on these initiatives, focusing on understanding ways that technologies might also support fathers.

Parents Online

Parents are a fast-growing demographic of social media users. Very little prior work in HCI has studied fathers online, though some work exists outside the field. Johansson and Hammarén analyzed eight blogs by young,

single Swedish fathers and described pictures of fathers and children, discussions of changing identities, and the challenges they faced as fathers [22]. An Australian study of a small chat room for new fathers showed they request and share social support using humor and self-disclosure [16]. A second study of the same dataset showed that fathers observed a lack of social spaces, support, and services for new fathers [42]. A Scandinavian study of new fathers in an online forum described their efforts to support one another and concerns they shared about being a new parent [13]. A second study of the same dataset focused on what they called “healthcare parental support” (HCPS) [37]. Fathers felt supported by HCPS, but they also felt disregarded and invisible, especially in relation to the mother. An intervention called the New Fathers Network improved first-time fathers’ self-efficacy and satisfaction during the first eight weeks after their child’s birth [21]. An intervention to support fathers of children with brain tumors demonstrated improvements in coping and grappling with challenges [34]. Together, these point to small but promising opportunities for supporting fathers.

Within HCI literature, we see that both mothers and fathers post statuses and photos of their new babies on Facebook, though mothers do this slightly more often than fathers [7]. Mothers have been a particular focus in HCI research, such as a CHI 2013 workshop on HCI and motherhood [5]. Mothers use Facebook to maintain their identity as more than just mothers during the early days of new motherhood [17]. New mothers use Facebook and Twitter to share about their child after birth and their posts are slightly more positive after a child’s birth [32]. A subset of mothers are active on anonymous sites to share and receive support about topics they might not feel comfortable sharing in face-to-face interactions or on non-anonymous sites like Facebook [39]. Prior work shows that offline social networks offer important methods, techniques, and support for mothers [12]. Mothers in dense offline networks exhibit more competence in mothering roles than mothers in loosely knit offline networks [1]. However, parenting philosophies tend to be controversial, and when shared openly, can be contradictory. If provided without additional support, such information can actually undermine a mother’s confidence in raising her child [1]. Prior work has not explored how fathers use social media, nor has it examined their attitudes about the role of social media in their lives; this work addresses that gap.

METHODS

We conducted semi-structured interviews with 37 fathers about their use of social media. Most of the interviews were conducted with fathers in the U.S. (n=31) but also from Canada, Australia, Germany, Sweden, Taiwan and Jordan (one father from each). We recruited fathers by contacting organizations for fathers, posting advertisements on organizations’ Facebook pages (with their permission), and posting to online platforms like Twitter. The recruitment message requested participants who were fathers and who

	Marital Status	Degree, Employment		Partner Degree, Employment		*	**
F01	Married	CO	FT	BA	PT	2	4,8
F02	Div (non-resident)	CO	FT	HS	PT	1	3
F03	Married	CO	FT	BA	SAHM	3	½, 4, 6
F04	Married	GS	FT	BA	PT	2	½,3
F05	Married	CO	FT	BA	FT	3	10,12,21
F06	Married	CO	FT	MA	FT	2	4, 9
F07	Married	GS	FT	MA	SAHM	1	1
F08	Married	GS	FT	MSW	FT	1	2
F09	Married	GS	FT	HS	SAHM	1	3
F10	Married	CO	FT	BA	PT	3	6, 14, 15
F11	Married	GS	FT	BA	FT	2	4, 7
F12	Married	GS	FT; SAHD	BA	FT	3	9, 12, 15
F13	Married	CO	FT	BA	SAHM	2	2, 4
F14	Married	GS	FT	MD	FT	2	10, 13
F15	Married	HS	SAHD	PhD	FT	2	7, 10
F16	Married	GS	FT	BA	SAHM	1	2
F17	Married	GS	FT	PhD	FT	2	6, 9
F18	Married	HS	FT	HS	SAHM; Homesc hool	2	6, 7
F19	Married	CO	FT	BA	SAHM	1	2
F20	Married	CO	FT	BA	SAHM; Homesc hool	2	3, 5
F21	Div (resident)	GS	FT	MA	FT	1	21
F22	Married	HS	FT	HS	PT	4	5, 7, 11, 14
F23	Div (custody of 1)	CO	FT	BA	NA	2	14, 17
F24	N/A (split custody)	HS	FT	NA	NA	1	7
F25	Married	GS	FT	MA	FT	2	7, 15
F26	Separated	CO	FT	BA	FT	1	7
F27	Married	CO	FT	BA	FT	1	1
F28	Married	HS	FT	MSW	FT	2	6, 10
F29	Married	GS	FT	BA	FT	2	4, 11
F30	Married	GS	FT	M.Ed	FT	2	12, 15
F31	Div (split custody)	HS	PT	BA	NA	1	8
F32	Div (primary custody)	GS	FT	NA	NA	4	7, 8, 10, 11
F33	Married	GS	FT	PhD	SAHM	2	13, 18
F34	Married	CO	FT	BA	SAHM	5	10, 13, 15, Missing
F35	Div (split custody)	CO	FT	Cert	FT	1	10
F36	Married	CO	FT	BA	Student	2	3, 3
F37	Married	CO	FT	Assc	SAHM	3	1.5, 4, 8

Table 1. Participant and partner demographics. *Number of children. ** Ages of children. SAH[D/M]=Stay-at-home-[dad/mom]; CO: College Education; GS: Graduate School; HS: High School

used the Internet; most participants used the Internet for a variety of purposes, which included fathering. Through online recruitment, snowball, and word-of-mouth techniques, we gained traction and scheduled interviews with all of the participants who expressed interest over the subsequent weeks. A substantial minority of participants—13 out of 37—were active father bloggers. Their stories are woven throughout the results. The content of their blogs however, was not used in the analysis.

Interviews were conducted between Oct 2013 and February 2014. Most fathers were married at the time of the interview (n=30); the remaining seven were separated or divorced. Six had high school diplomas or a GED, 16 had bachelor's degrees, and the remaining 15 had advanced degrees. Two participants were stay-at-home-fathers (SAHDs), one worked part-time, and the other 34 worked full-time. Their partners were equally educated: four had high school diplomas, two had an associate's degree, 18 had bachelor's degrees, and the remaining 15 had advanced degrees. However, partners (mothers) worked in paid professions less than participants (fathers); 11 were stay-at-home-mothers (SAHMs), five worked part-time, and the remaining 21 worked full-time (compared to 34 of the fathers). Most fathers were heavy users of social media. They used Facebook (n=35), Twitter (n=24), Instagram (n=10), Pinterest (n=9), and Reddit (n=6).

The shortest interview length was 20 minutes (unanticipated language barriers made the interview difficult to execute), and the longest interview was 90 minutes. The median time was 47 minutes. Most interviews were conducted over the telephone (n=19) and Skype (n=12); a smaller number were in-person (n=6). The interview began with background questions about who lived in the home with the father (if anyone), their employment, and the children in the home (if any). We asked fathers about their roles as fathers, about their parenting philosophies, and about their social media and Internet use. The last section focused on perceptions of stigma and judgment; we asked what they would post online or not and why, and experiences of judgment they might have felt online or offline. We also asked whether they felt that mothers and fathers used the Internet differently related to parenting. We transcribed the interviews and coded them using an inductive process [40]. We conducted multiple passes over the codes, iterating until we began to see broader patterns in the data. The research team discussed the codes between each pass and developed themes after the final coding. We describe fathers' lives from their own perspectives in the Results; we synthesize and interpret their stories in the context of differences between fathers and mothers and parenting more broadly in the Discussion. Most of the respondents either had a college or graduate education (n=32). This is higher than the national average for holders of a college degree or more (27%) [36]. Future work in this area should investigate the use of social media by fathers with lower SES.

RESULTS

Results are organized around three overarching themes: use of social media to learn how to be a father, how diverse experiences influence social media use, and perceived barriers to sharing online. Many fathers' experiences overlap across these three themes; taken together, they shed light on opportunities and limitations of social media for supporting fathers and fatherhood.

Motivations for Using Social Media

Learning how to be a Father

Fathers turned to online sites like Facebook to ask parenting questions and read parenting information from other parents. Social media sites served as filters for fathers to see parenting content without necessarily having to go look for it. F12 told us: "social media acts as a content curator for me." F13 similarly noted:

It's mostly your friends or people that are part of your friends on Facebook. So, [if] someone's talking about the new way to get your kids to fall asleep earlier tonight... and your kid was one that wasn't sleeping well, I'm sure you would look twice at it and think about it, be influenced by it. F13

The extent to which fathers looked for information online varied with their experience and parenting styles. For example, F04 relied on online posts when he was a new father; now that he had his own "parenting philosophy," he was more likely to aggregate conversations online into a "cohesive viewpoint" that was aligned with his existing philosophies. F26 also aggregated multiple viewpoints into his parenting philosophy:

Just hearing all the stories from countless [fathers], just we listen to hundreds of podcasts and [read] thousands of blog posts just on any given year and I mean you can't not be a better father after having consumed as much fatherhood content. F26

Fathers also used social platforms to learn about what kinds of activities they could do with their children. F02 and F29 both followed other parents on Pinterest to find activities they could do with their young children. F07 kept track of activities that other parents in his Facebook network shared. F01, a non-resident father, Skyped regularly with his daughter and looked online for examples of what to do to maintain a child's attention on Skype.

Participants also looked to other parents, to learn from their mistakes. Some observed other parents' parenting decisions, and if they felt they were bad or wrong decisions, took care to avoid those decisions themselves. F15 said he had rarely been influenced enough to change his parenting style based on other fathers' posts on social media, but he did sometimes read a story and think to himself 'boy, I would never do that with my kids.' F35 said he "cringed" when he saw other parents criticizing their children publicly online and had become more aware of criticisms he might

post about his own children. Fathers also sought affirmation of their own parenting styles when they interacted with other parents. However, in many cases, parenting styles differed, and these differences manifested on Facebook:

I've had friends of mine who had fights about [cry-it-out versus co-sleeping] before on [Facebook]... One friend would be trying the cry-it-out method with his kid...and another one would be like 'how could I let my baby cry?' Each parent is clinging on the faint hope that they are not screwing up their kid and if they need to bitch a little about it on their Facebook page to feel good about that, I am totally for that. F07

Fathers described the positive benefits of being able to compare themselves to other parents, not because they enjoyed seeing other parents fail, but because they felt reassured knowing that other parents faced similar challenges. For example, F07 said he felt more secure when he saw other parents in his network going through the same problems he and his wife experienced:

[I'm] glad other parents go through [parenting problems]... so, it's kind of like...positive social comparison... so it's normal to feel stressed out about stuff like that. F07

F06 had a Facebook friend who posted regularly about his son's autism on Facebook. Whenever F06 felt frustrated about raising his four-year-old, he recalled posts about his friend's son and felt he gained better perspective.

Documenting and Archiving Fatherhood

Participants were interested in documenting their lives as fathers, both to share their experiences with other fathers as well as to create a record they could return to when their children were older:

When I'm home alone with the kids, I'll be talking to myself quite a bit... I have a great time with my kids. I'm like, "You know something? Let me start putting this down on paper, or on the computer". I just felt like I have something to share. I enjoy it, and if nothing else, eventually as the kids get older, it'll be something for them to look at and read and hopefully get a laugh out of. F22

Father bloggers were motivated to blog by their interest in documenting, archiving, and sharing their lives as fathers. They also described blogging as a platform that facilitates more detailed expression. F19 described his experience:

Facebook, Instagram... everything is sound bites these days... So [the blog is] really almost just a public journal of things that I'm either thinking about, things that I might want to express, and it also serves as a tool for my son to go back and read one day so that he knows where his father's mind was at during a certain point in his life. F19

Two participants, F12 and F37, had created aggregate sites for fathers to cross-post and comment on one another's blogs. Both were motivated to do this by the lack of sites for fathers online, feeling that there was an abundance of sites for mothers, but not enough for fathers. F12, a SAHD for the first of his three children, lamented the lack of fathering material during that time especially:

Everything that was online was branded for moms. And we felt like men were taking on a completely new role, in terms of, caretaking and involvement in the home. And it just wasn't being reflected in what was being published online and we felt like there was a real opening to help, to serve the dad audience. F12

F37 had created a popular site that aggregated and cross-posted posts from other father bloggers. F37 felt that though more fathers were doing childcare, they were still sharing a disproportionately small amount about their lives as fathers compared to mothers. Furthermore, though his site had considerable father blogger engagement, he felt men were predominantly still interested in content areas related to sports, news, technology, and health rather than parenting.

Fathers felt that humor was an appropriate way of communicating online. One father, F22, was critical of fathers who were too negative:

It's almost like "Jeez man, lighten up already". Okay, if you're gonna have a blog, write something funny, like do a review about some product that's good for parents. Don't sit there and complain because a diaper commercial has women in it instead of men. It seems like some of the dads are just really... Aside from going on their own accomplishments, it seems like they whine a lot more than the women do. F22

Though F22's critical tone was not pervasive, it did surface a point of disagreement among the fathers who blogged about the role of advertising and monetizing their blogs. Some father bloggers felt that the attention mother bloggers received from advertisers should also be given to father bloggers. F12 had considered connecting with brands that might sponsor his blog; however, other fathers perceived the prospect of monetization to be a threat to the authenticity of their online presence. F19 felt that the Dad 2.0 Summit involved a lot of "pandering" where sponsors tried to influence father bloggers in particular ways. Though not unique to fathers, this reveals a tension father bloggers experience between a pure documentation of their experiences of fatherhood online versus integrating this motivation with an external agenda, one that will impact how authentically fathers are able to express themselves.

Accessing Social Support

Six participants belonged to closed Facebook groups for fathers. They felt these were safe and private spaces to discuss challenges or to vent about parenting as well as

marriage, focusing on the relationship with the spouse in addition to child-rearing questions. One, for instance, described a personal incident he had shared with the group:

My wife and I got in a very heated debate on the home front, verbal battle argument, borderline kind of physical abuse happening there. And long story short, that night ended up locking myself in a car because I wanted to isolate myself from my very family, for my own safety. While I was in that car, whipped out my smart phone, got on the private Facebook, said, "Hey, guys. I'm dealing with this. My wife and I are [in a] highly... combative situation on the home front, I've locked myself in my car. [chuckle] I'll be staying here until 6:00 AM. What do I do? I can't deal with this shit. [code removed]"

F37 emphasized that other fathers in his Facebook group were very understanding. He would turn to them without hesitation "if I'm looking for some help or some suggestions." Older fathers who had raised their children through adulthood remained in such groups to provide social support for younger fathers. For example, though F21's son was now an adult, F21 remained in a Facebook group and gave one example of recently offering advice to a father who was granted sole custody of his three-year-old child. Though some fathers in our study reported being members of Facebook groups for fathers or participating in offline groups for fathers, the majority did not report participation in either of these.

Diverse Experiences and Social Media Uses

Though many participants in our sample fit into a normative family arrangement of a husband and wife and one to three children [10,11,24,35], a number of them were in, or had come from, particularly diverse family arrangements. This section focuses on single fathers, fathers raised by single mothers, and stay-at-home-fathers. Their stories echo the motivations for using social media presented in the prior section; however, they also described particular motivations based on their diverse experiences and contexts. Though the sample size of each is small, telling their stories is important for understanding the diversity of fathers' experiences online.

Single Fathers

Three participants used Reddit to connect with other fathers and discuss fatherhood. All three were no longer in a relationship with their children's mother. They turned to specific subreddits relative to their own lives. For example, F32 was a single father who posted pictures of his children to Facebook but preferred not to ask parenting questions there; instead, he went to general parenting subreddits as well as the single parenting subreddit because he wanted to find information in an "anonymous type of site." F31 had joint custody of his son with his ex-wife. Since his recent divorce, F31 felt that his activity on Facebook had decreased and he was sharing less there than he used to. He

had also turned to parenting subreddits, though he typically lurked rather than posting questions himself:

I look through there and I've seen what other single dads are... Well, not single dads, but people co-parenting with a partner, and try and get a feel for sort of how other people are dealing with these situations... it's just interesting to get their perspective and see the things that they've had to deal with. F31

F02 was also recently divorced. The dissolution was related to his decision to leave the faith that he and his ex-wife had been born into. He joined a subreddit for other individuals who had left the same faith. Though the subreddit was not meant explicitly for single parents, many of its members were facing divorce or broken families because one partner had decided to leave the faith.

You know, people talk about their family and divorce and going through divorce, the trauma of leaving religion and things like that and they would help relate and talk about that what they have gone through... that experience when they leave the religion and the family breaks up, you know, divorce, and then antagonism between them and other family members. I relate where I can. F02

He suggested that Reddit provided a "peaceful place to post an opinion, as opposed to Facebook where I already know that I am very different from that group of people." Reddit's anonymity provided an advantage over Facebook in the context of the complex social relationships he had with other members of his family and friends, all of whom were still practicing followers of the same religion.

Fathers Raised by Single Mothers

Three participants lacked a father figure themselves and had turned to the Internet in order to find father role models. "I am an accident", explained F18. "My biological father was a big-time junkie, and he was here and there, in and out":

The Internet, for better or for worse, taught me how to be a man, how to interview for a job, how to propose to a girl, how to change a diaper. I mean these things... I went to the Internet just looking for help, and like I said, for better or for worse, you take the good with the bad. That's how I learned how to be the man I am today. They've really helped me become a good dad, 'cause I didn't have a good example growing up. And that was a scary thing about having kids is: how are you supposed to be a good dad when you didn't have one? F18

F37 was also raised in an environment where his biological father was unavailable to him. Joining a father blogger group provided him with an opportunity to discuss his parenting problems with other fathers and to ask questions.

So when [my brothers and I] became fathers, a lot of us were just kind of taking it day by day, making it

up as we went along. I don't even know if my brothers ever asked advice from anybody. So feeling I'm not alone when I suddenly found myself joining a father blogger group, stories, anecdotes, comments back and forth, made me feel like I was not so alone. I had people, if I posted something that I was worried about with my children or a concern or frustrated with, immediately, I had other fathers saying "I know exactly how you feel." F37

F24's father was similarly unavailable to him. F24 described a troubled childhood that included drug addictions and an unplanned pregnancy. He experienced a major transformation when he became active in a church: he "began to seek out other men's groups. I needed to get some strong Christian men around me." He was the only single father in his men's group and started a blog for single Christian fathers in which he described his own life and the experiences of other father bloggers online. He created a Facebook page for single fathers as well and described a community that had coalesced around shared experiences.

Stay-at-Home-Fathers

Two participants, F12 and F15, had been or were currently SAHDs, and they used social media sites to find other SAHDs they could talk with and relate to. Both described experiencing biases against fathers both offline and online. F12 described going to Starbucks, where women would say things like "oh, you're giving mom a break, how nice" and would talk to the baby instead of to him. F15 told us he "needed a social life. I needed to get out of the house and talk to other adults." The first online parenting group he joined was overwhelmingly composed of mothers, so he focused on finding fathers groups specifically. He echoed the importance of fathers groups for socializing—and socialization—for both him and his children before they became of school age.

Other fathers who were not SAHDs themselves also valued the roles that SAHDs played online. F37 worked full-time but said:

Well, some of these guys have been stay-at-home-dads for a number of years. They day-in and day-out have to deal with everything that I don't. I feel like I'm more well-equipped... because these guys have all done it before. There's plenty of them that have done, that are empty-nesters that, or kids who are teens, and then there's new dads. So you have someone, some other people who will always pitch in and say, "I know what you're going through, maybe try this." or "This is what I did and it worked. Not saying it's for you, but maybe give it a try." F37

F04 joined Facebook groups for fathers and attended social meetups with fathers and their children, though his reliance on both online and offline social gatherings decreased when his children went to school. After going to daycare or

school, children made their own friends and participants reported a decreased reliance on online groups.

Barriers to Sharing Online: Privacy and Judgment

Fathers were sensitive about sharing too much information online that might violate their children's privacy or that might subject them to stigma and judgment from other parents. Some responded to these concerns by selectively posting on one platform versus another (e.g., Facebook versus blogs). F37 explained:

On my dad blog... I kind of try to be careful how much I put out my children's photos for the world to see, but I have my closed, private social media sites that I post to as well for family and friends. F37

Fathers were especially sensitive about sharing information about their young children online. They engaged in protective behaviors like searching for their child's name on Google to see if pictures of their child might come up. Others used pseudonyms to obscure their child's identity. F26 was going through a divorce at the time of the interview and was now second-guessing some of the posts he had shared publicly about his separation. He was not concerned about his ex-wife seeing them, but instead that his son might see them when he got older. F28 had posted publicly about a long-standing conflict he was facing with his children's school where he had shared his opinions and documentation of events. His wife felt he should not be blogging about school conflicts but he was less certain:

Could [my children] be retaliated against? It's a big concern, but I feel like we have to do the right thing, and we have to set the right example that we're standing up for what we believe in. F28

Fathers also expressed privacy concerns regarding their own profiles. F17 had considered joining a public Facebook community page called the Orange Rhino Challenge which calls on parents to "Yell Less and Love More." The goal of the challenge is to decrease the number of times a parent yells at his children. F17 told us he was taking the challenge (successfully), but he decided against "liking" the community page on Facebook because it would publicly display to his network that he yelled at his children. F11 similarly noted that he would not want to post his "flaws as a parent."

Fathers refrained from offering advice to other parents to avoid backlash about controversial topics. They tended to avoid divisive topics like sleep training, vaccinations, and breastfeeding. F04 felt that anything someone posts related to parenting would create "a fan and an enemy," so he kept his parenting posts to a minimum. He felt that as a result, Facebook had become the "softened" version of his identity. Others shared this perspective:

I've never said anything like, "Oh, we're letting our son cry it out tonight." I've seen many conversations on Facebook...you know, I am against spanking and

I did say that on Facebook and people feel judged when I say it and that can be a very sticky place to maneuver, so I try to avoid it because ruffling feathers in the social media space... Facebook is this funny place and where I gotta huge range of contacts... F06

F11 felt his parenting style could probably be inferred through some of his posts, but he would not explicitly share his parenting philosophies in a Facebook status. Thus, people might judge the way that he parented, but they would not have a mechanism to directly confront him about it. Fathers described a variety of ways that parents might judge one another online using general, vague, or indirect language to criticize other parents' approaches:

Like they won't mention it as in saying that you are doing the wrong thing, but they will mention it by justifying what they are doingthat they are doing the right thing...which by logical extension means that what we are doing is wrong. F07

Not all fathers shared the experiences of judgment on Facebook, however. Some fathers, such as F09 and F12, reported having relatively homogeneous networks—usually family and close friends—so they felt comfortable expressing parenting opinions there, but this perception was less common among participants.

DISCUSSION

Differences between Mothers and Fathers Online

Fathers use social media to document and archive fatherhood and to access social support, similar to mothers [17,32,39]. However, two differences emerge. First, fathers used social media to “learn how to be a good father”, a practice that was especially critical for fathers who felt they did not have good father role models themselves. In contrast, mothers do not frame their motivations as “learning how to be a good mother” [17,45], though they do seek validation of motherhood, a subtle difference. To illustrate, consider how a search of books for new fathers (e.g., search Amazon for “fathers parenting”) surfaces books that are referred to as “guides”, “manuals” or “advice”; this phenomenon is rarely observed as indicated by the same search for mothers books. This difference may emerge from early socialization processes through which mothers are expected to take to motherhood naturally [19]. Fathers are left believing that they must learn how to be a father, regardless of whether there are actual differences between what a mother or father knows when they become a parent.

Second, fathers report a dearth of sites for fathers online. Indeed, the overwhelming popularity of sites for mothers (BabyCenter.com says 1 out of 5 new moms globally are BabyCenter users [4]) indicates that their perceptions are accurate. This phenomenon is pervasive offline as well; LaRossa describes how Parenting Magazine created a

“Fathers Column” in the 1930s in response to interest for fathers. Yet, this single column indicated that the rest of the magazine was by default designed for mothers [29]. Almost a century later, this trend continues with the June 2014 issue containing a “For Fathers Only” section focused on fathers. This highlights a prevalent theme in participants' narratives: mothers and motherhood are overemphasized in parenting platforms online. Though not the focus of this analysis, it is interesting to note the contrast between mothers as the dominant group of social media users as compared to fathers as the stereotypically dominant user in other technological contexts such as video games or more recently, the maker movement [41].

Opportunities of Social Media for Supporting Fathers

This section explores ideas for promoting a research agenda to better support fathers online.

Developing Schemas of How to Be a Father

Fathers enter fatherhood with particular schemas about childrearing that draw on socialization they have experienced throughout their own upbringing. Prior work describes the process of searching for information online as a “search schema.” Search schemas that are developed about a particular domain could be shared with others with similar needs [25]. Social media sites could explore designs that promote fathering schemas paired with search schemas to help fathers find higher quality information about fatherhood, as well as to find other fathers with similar needs. Consider some examples: fathers experiencing marital problems may avoid the stigma of Facebook, but not realize there are private Facebook groups or anonymous subcommunities on Reddit they could turn to for support. Fathers looking to advocate for fathers' rights could turn to blogging communities to find like-minded fathers. Both of these examples counter traditional norms and expectations of family life; developing search schemas for finding support might expose fathers to other fathers' struggles, validating their experiences through positive social comparisons [15].

Reducing Perceived Stigma through Anonymity

Perhaps the biggest threat to the support of fathers online—and parents more generally—is the strong perception of judgment described by fathers in our study and echoed in prior work [2,31,39]. Public sharing in social media platforms can threaten fathers' self-image, especially those experiencing stigmatized life changes such as a recent divorce. Anonymous venues where fathers can feel comfortable sharing might help overcome the perceived stigma and judgment a father experiences on real-name sites. When acting anonymously, fathers can post controversial or unpopular parenting philosophies and have an easier time ignoring comments if they are met with judgment; an approach that would be difficult on a personal Facebook profile. However, some limitations exist. The private, anonymous nature of these platforms can make them hard to find, especially given the shortage of fathering sites online. Second, these kinds of interactions inhibit

fathers from receiving persistent social support through the strong ties available in Facebook groups or father blogger groups. Furthermore, parents tend to screen for content and people that expresses similar belief systems and orientations [12]. Balancing access to diverse parenting perspectives while maintaining access to affirmation and support is an important goal.

Increasing Visibility of Audience Norms and Expectations

One approach for overcoming perceptions of judgment or even perceived stigma is to help posters understand what their audience might expect—and want—to see, so they can adjust what they post and to whom accordingly. Parenting philosophies are personal, complicated, and nuanced, and sharing them online can isolate a poster from an audience who does not share their views. Furthermore, social media users' inability to anticipate an audience's expectations and reactions can make it especially difficult for parents to know how their posts will be received. Prior work shows that parents of children with special needs feel less judged online than offline, but nuanced notions of what is acceptable (e.g., humor) versus not acceptable (e.g., violence) challenge parents to find the right balance of what to post [2]. Future work could explore audience perceptions of appropriateness in order to help fathers—and mothers—craft their parenting posts to supportive audiences. For example, if certain categories of posts are known to be controversial (e.g., sleep training), fathers might decide to share them to a smaller audience of close father friends. If they desire feedback from a broad audience, they might turn to a site like Reddit where they can manage threats to their self-image more judiciously. The acceptability of different types of posts could be evaluated using norms elicitation protocols [2] through a survey or crowd approach; this would enable fathers to understand whether they are likely to be judged for different posts to different audiences.

CONCLUSION: TOWARDS A RESEARCH AGENDA FOR SUPPORTING FATHERS

Many non-profit and government organizations have pushed for changes in fathers' attitudes and in policies to support fathers [10]. Efforts to develop new parenting schemas about fathers' roles in their children's lives require that fathers be provided with information, support, and buy-in to these roles. Our results show that fathers' motivations for using social media include documenting and archiving fatherhood, learning how to be a father, and accessing social support from other fathers. Fathers coming from diverse family environments rely on online spaces to find fathers in similar experiences. However, fathers lament the lack of spaces online to support fathers and fatherhood. Future work should explore how to provide fathers with online platforms where they can access information and support. We take an advocacy stance, arguing for more research that aims to understand fathers' social lives and how they might be better supported through computing technologies.

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