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Research Article

Celebrity culture and demographic change: The case of celebrity nonmarital fertility, 1974–2014

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Celebrity culture and demographic change: The case of celebrity nonmarital fertility, 1974–2014

Hanna Grol-Prokopczyk¹

Abstract

BACKGROUND

In recent years, demographers have proposed increasingly sophisticated models of culture's relationship to demographic patterns and change. However, little research theorizes or empirically examines how celebrity culture might shape demographic norms, despite the pervasiveness of celebrity news.

OBJECTIVE

I argue that demographic theories of culture and social networks can be fruitfully expanded to address the role of celebrity culture. Empirically, I evaluate the quality and quantity of US news on celebrity nonmarital fertility since the mid-1970s, examining dominant framings of and responses to nonmarital fertility, and comparing celebrities' nonmarital birth ratios to those of the general US population.

METHODS

People magazine covers, 1974–2014, were coded for all celebrity fertility-related stories, and analyzed qualitatively and quantitatively. Nonmarital birth ratios from *People* were compared with those from US vital statistics.

RESULTS

People has consistently presented nonmarital conceptions – and, in its later years, nonmarital births – in a highly positive light. Celebrity fertility-related news spiked appreciably beginning approximately in the year 2000. Engagement (rather than marriage) has become an increasingly common response to celebrity nonmarital conceptions. Celebrities have lower nonmarital fertility rates than the general population, but among non-Hispanic whites who attended college, celebrities have had higher rates.

CONTRIBUTION

News about celebrity fertility is increasingly common, and highlights positive framings of nonmarital fertility. Although these findings do not permit strong causal claims, they

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suggest that celebrity news may have contributed to the destigmatization of US nonmarital fertility, especially among college-educated non-Hispanic whites. Demographic research could benefit from deeper scholarly engagement with celebrity and popular culture.

1. Introduction

1.1 Explaining rising nonmarital fertility

In 1940, 3.8% of US births occurred to unmarried women. By 2009 this figure had risen over ten-fold to 40.8% (Solomon-Fears 2014). National surveys confirm marked shifts in attitudes towards nonmarital childbearing: Among General Social Survey respondents, the percentage strongly agreeing that “people who want children ought to get married” halved between 1988 and 2012 (from 30.0% to 15.1%) (Smith et al. 2015). Scholarly explanations for these substantial behavioral and attitudinal shifts have focused on a combination of economic factors, such as women’s increasing financial autonomy, and cultural factors, such as growing secularization and individualism (Lesthaeghe 2010; Willis and Haaga 1996).

However, recent scholarship argues that both economic and non-economic explanations often under-theorize fertility-related decisions and the complex cognitive, psychological, and sociocultural factors underlying them (Bachrach 2014; Bachrach and Morgan 2013; Huinink, Kohli, and Ehrhardt 2015; Johnson-Hanks et al. 2011; Schoen and Tufis 2003). In particular, a growing number of studies emphasize the importance of “schemas” (mental representations) of childbearing, parenthood, and marriage, which “are imbued with sensation and feeling and may be linked strongly to a person’s identity or sense of self” (Bachrach and Morgan 2013: 462; italics in original). Fertility-related decisions, it is argued, emerge at the intersection of individuals’ structural circumstances and their personal schemas (Bachrach and Morgan 2013; Johnson-Hanks et al. 2011).

Bachrach and Morgan write that “the schemas we learn and use most reliably are those we learn from observing recurring patterns of social life” (2013: 468). “Social life” typically refers to interactions with people one knows personally, but in the media barrage of the late 20th and early 21st centuries, social influence may well come from individuals one has never personally met: celebrities. Celebrities “implant themselves firmly in the minds and hearts of the public,” shape fashion and tastes, and are often treated by fans as close friends, as evidenced by public outpourings of grief upon their divorces or deaths (Leslie 2011: xiii, 1).

Below, I present empirical and theoretical reasons to consider media depictions of celebrities as “recurring patterns of social life” that shape beliefs about the types of family formation that are normal, moral, and/or desirable. I then explore the more specific question of how celebrity culture might have contributed to destigmatization of nonmarital fertility in the United States.

1.2 Celebrities as agents of cultural change

Demographers rarely seriously examine the role of popular culture in shaping fertility-related norms. However, it is a priori plausible that celebrities (and popular culture more broadly) could shape fertility behaviors and attitudes. For most of the past decade (if not longer) the most widely read magazine in the United States – attracting an average of approximately 40 million readers per issue – has been the celebrity weekly magazine *People* (Dool 2017; Johnson-Greene 2009). *People*’s web site is also widely read, periodically setting traffic records (e.g., of over 70 million unique monthly visitors; Time Inc 2014). Other celebrity/entertainment magazines also rank highly in terms of readership (Folio 2018). Collectively, their pages, paper or virtual, reach a substantial portion of the US public.

News about celebrities can diffuse with striking speed and thoroughness. For example, three weeks after Angelina Jolie published an op-ed in *The New York Times* about her decision to get a preventive double mastectomy, a nationally representative survey found that 74% of US adults knew about Jolie’s decision (Borzekowski et al. 2014). One can speculate that celebrity baby news, with its potential to be accompanied by appealing photos, could diffuse at least as thoroughly. Young adults may be particularly attuned to celebrities: one study found that 75% reported “strong attachment” to multiple celebrities (Boon and Lomore 2001).

Scholars of popular culture note a recent dramatic rise in media coverage of celebrity fertility: “[A]lmost every issue of every entertainment magazine features either celebrity wanna-be moms, pregnant stars, or mothers with their babies” (Podnieks 2012: 88). Cramer refers to this as a “cultural obsession with celebrity pregnancy” (2016: 1). However, most research on celebrity babies has been unrelated to fertility decisions, instead analyzing topics such as public judgments of celebrities’ weight gain or parenting styles (Cramer 2016; Douglas and Michaels 2004; Podnieks 2012).

There is, however, a small but growing body of research directly linking popular culture to fertility-related behavior. Recent studies find that Brazilian women who watch television soap operas, which portray relatively small families, have lower fertility than women in areas without access to soap operas (La Ferrara, Chong, and

Duryea 2012), and that regions with higher viewership of the television program *16 and Pregnant* showed greater declines in teen pregnancy (Kearney and Levine 2015; Trudeau 2015). Celebrity culture has been shown to influence very personal family-related decisions, such as the naming of offspring (Liebersohn 2000). However, to my knowledge, no demographic research has explored how celebrities might contribute to changing norms regarding nonmarital childbearing.

Although it may be uncommon for people to explicitly attribute their fertility-related decisions to celebrity emulation, there are nonetheless strong reasons to suspect that celebrities could have influence in this arena. First, psychological research is very clear that sociocultural forces influence individuals outside of their conscious awareness. Enabled by automatic brain processes that constantly collect information about the environment (Bachrach and Morgan 2013), people regularly mimic others' perceived attitudes or behaviors "without any conscious intent or awareness" (Bernardi and Klärner 2014: 646; cf. Shepherd 2017). As Johnson-Hanks et al. (2011: 34) note, citing Mandler (2004: 49), "Humans are great pattern learners... 'because so many (schemas) are nonconsciously acquired and operate outside our awareness.'" In this light, personal assertions of being uninfluenced by popular culture cannot be considered definitive.

Second, news outlets, especially when their profits come largely from newsstand sales or website clicks rather than subscriptions, are incentivized to cover topics with wide popular appeal. *People* was launched precisely because market researchers for *Time* magazine found that "nearly every [*Time* magazine] reader went to its 'People' section first before reading any other part of the magazine" (Douglas and Michaels 2004: 117). The financial success of *People* inspired widespread copycat celebrity news coverage, with magazines conducting focus groups to "see which celebrity would sell best" (Douglas and Michaels 2004: 118). Thus, if celebrity baby news has become increasingly popular over time, this strongly suggests that such news is willingly purchased and consumed by the public. Indeed, *People*'s publication of celebrity baby photos has led to some of its best-selling issues and to large spikes in its online traffic (Barnes 2008; Pérez-Peña 2008).

1.3 Theorizing celebrity influence

As noted, recent theory describes culture as a network of schemas, which encompass a broad range of mental representations of the meaning of events, including emotional or evaluative meanings (e.g., Bachrach 2014). Given that cultural schemas are learned "primarily through social interactions" (Johnson-Hanks et al. 2011: 6), findings from

social networks research can help clarify how beliefs and behaviors are shaped by others.

One such finding is that the behaviors of individuals who are “prominent, noticeable, and easy to recall [...] may be disproportionately weighted in making inferences about the group as a whole” (Shepherd 2017: 77). Celebrities are “prominent, noticeable, and easy to recall,” and while they are not usually conceptualized as members of non-celebrities’ social networks, this may reflect a limitation of this area of research, in which “extra-household or extra-family social influences [are] rarely considered” (Bernardi and Klärner 2014: 656). I posit that in many ways celebrities do function as social network members (especially in the age of social media, when fans can “friend” and “follow” celebrities, etc.).² Research confirms that the “parasocial” (one-sided) relationships that individuals form with celebrities resemble real relationships in consequential ways (Derrick, Gabriel, and Tippin 2008). Bernardi and Klärner (2014) identify four main mechanisms by which social groups influence individual action: social learning (in which individuals observe, learn about the consequences of, and potentially adopt or reject others’ behavior), social pressure (in which individuals conform to social norms to receive approval or avoid censure), social contagion (in which individuals ‘catch’ ideas or behaviors from others, via emotional contagion or unconscious mimicking), and social support (such as material or emotional support). Of these, celebrities contribute directly to social learning and social contagion, and arguably (if less directly) to social pressure. Only direct social support is absent.

That prominent members of a social network can make certain behaviors seem particularly common is consequential for group attitudes and behavior. A growing body of psychological research demonstrates that “things, simply by becoming more common, become more acceptable” (Bear and Knobe 2017a; 2017b: SR8). In turn, perceptions of acceptability or normality shape behavior, which tends to drift towards perceived norms (Shepherd 2017). This causal sequence – in which high-visibility individuals shape perceptions of what is common, what is seen as common shapes what is considered normal, and such norms shape subsequent action – is one means by which celebrities can influence population-level behavioral trends. I describe this as a *prevalence-based model* of celebrity influence, since it involves celebrities shaping perceptions of the prevalence and hence normality of specific behaviors.

² Celebrities can provoke strong emotional responses, comparable to – or greater than – those inspired by people one knows personally. An analysis of 3,414 tweets containing the string “Brangelina” and sent in the week after the announcement of Angelina Jolie and Brad Pitt’s separation found that 32.4% expressed sincere sadness or grief, e.g., “I thought I was heartbroken when Ben and Jen split, but I’m destroyed by this news;” “Taking the brangelina divorce harder than I took my own parents” (unpublished analysis by Hanna Grol-Prokopczyk and Monica Stephens).

Psychologists note that while people “have a well-demonstrated capacity to pick up information about the statistical properties of their environments,” their assessments of normality combine such information with moral evaluations (Bear and Knobe 2017a: 1). Thus, another means by which celebrities can shape population trends is by making certain choices appear particularly appealing or desirable, as when media highlight celebrities’ attractiveness, happiness, likeability, moral uprightness, etc. This may shape popular schemas of the presented behavior, imbuing them with positive associations. (Moreover, celebrities’ social prominence may make their behaviors particularly easy to call to mind, triggering the availability heuristic.) I refer to this as a *glamorization-based model* of celebrity influence, since it operates through positive or idealized framings of celebrities’ characteristics or actions. Such framings are not inevitable: celebrities can be subject to public censure as well as admiration (Podnieks 2012). Detailed analyses of celebrity media coverage are needed to clarify the dominant framings surrounding a specific behavior.

While celebrities are likely to reflect societal norms as well as shape them, this study focuses on the latter process, since celebrities have greater power to shape population norms than do non-celebrities. Both prevalence-based and glamorization-based celebrity influences could affect individuals who are not invested in celebrity culture, given the evidence of people’s unconscious monitoring of their environments discussed in the previous section. At the same time, as theorists of culture note, culture is not homogenous but provides space for dissent and contradiction (e.g., Johnson-Hanks et al. 2011). Social networks research also makes clear that individuals may adopt or reject others’ behavioral models, with perceived social similarity being one of the factors shaping such decisions (Bernardi and Klärner 2014). (For example, given the “extraordinary level of racial/ethnic homophily” in US social networks (McPherson, Smith-Lovin, and Cook 2001: 421), one might suspect that minorities would be less likely than whites to attend to or identify with white celebrities.) Celebrity culture, then, is neither monolithic nor all-powerful, and may influence certain demographic groups more or differently than others. Nonetheless, it is a potentially important factor shaping schemas relevant to demographic processes, and as such is deserving of demographic inquiry.

1.4 Celebrity nonmarital fertility

The specific ways in which the media present celebrity nonmarital fertility have not been studied in detail. Do news stories depict unwed celebrity mothers as happy and devoted, or as overwhelmed and irresponsible – i.e., does celebrity news typically support positive or negative schemas of nonmarital fertility? It is also unclear what

specific responses to nonmarital conceptions celebrities engage in (do celebrities typically marry before the baby's birth?), and how such patterns have changed over time. The rise in nonmarital fertility in the United States has been attributed to "the decades-long decline of 'shotgun marriages,' rather than to an increased incidence of nonmarital conceptions" (Solomon-Fears 2014: 3). Destigmatizing alternatives to shotgun weddings could thus be a specific mechanism through which celebrities contribute to rising US nonmarital fertility rates.

Finally, there is no consensus among pundits or academics regarding whether celebrities have higher nonmarital fertility rates than the general population (or specific demographic subgroups). Cultural conservatives have frequently described celebrities as having nontraditional lifestyles, which contribute to an erosion of traditional family values. In 1992, then-US Vice President Dan Quayle famously rebuked the fictional television character Murphy Brown for choosing to become a single mother (Carter 1992; Cramer 2016: 42–43). Quayle's comments quickly expanded to a broader critique of "the cultural elite in Hollywood" for undermining the nuclear family, including via nonmarital fertility (Rosenthal 1992), and "kicked off more than a decade of outcries against the 'collapse of the family'" (Coontz 2005). By contrast, some scholars see celebrities as upholding the institution of marriage. McClintock, for example, argues that "the popularity of celebrity weddings and reality television shows such as *The Bachelor* and *The Bachelorette* attest to marriage's enduring appeal" (2015). At present, it is unclear whether celebrities are trendsetters, trend-followers, or trend-laggards in terms of nonmarital fertility.

The empirical portion of this study uses a combination of qualitative and quantitative analysis to address such questions.

2. Study goals

One goal of this study is to make the theoretical point noted above: Demographic models of culture and social networks could be fruitfully expanded to incorporate the potential impact of celebrity culture on population norms and behaviors. In addition, this study has several empirical goals, centering on the question of how (and how much) nonmarital fertility has been presented in US celebrity news. Specifically, I use 40 years' worth of *People* magazine covers and US vital statistics data to:

1. Estimate when and to what extent US media coverage of celebrity fertility has increased since the mid-1970s. Qualitative scholars refer to recent increases in media coverage of celebrity mothers (e.g., Cramer 2016) but do not specify the time frame or extent of the increase.

2. Qualitatively analyze how (i.e., through what narratives or normative evaluations) celebrities' nonmarital fertility events have been presented during this period. This furthers the goal of "identify[ing]... the shared schemas that set the stage for parenthood" (Bachrach and Morgan 2013: 480).
3. Identify the responses to nonmarital conceptions most frequently modeled among celebrities; e.g., how often did celebrities have "shotgun weddings," and did this change over time?
4. Explore whether nonmarital fertility rose sooner among featured celebrities than among the general US population, both overall and when disaggregated by demographic subgroup. This clarifies whether celebrity news might normalize nonmarital fertility by making it appear more common than it otherwise would.

Together, these analyses explore potential mechanisms through which celebrity news could influence societal attitudes toward nonmarital fertility: through its pervasiveness, its framings of nonmarital fertility, its modeling of specific responses to nonmarital conceptions, and/or its shaping of perceptions of nonmarital fertility frequency. Analyses 1, 3, and 4 primarily assess the possibility of prevalence-based celebrity influence, while 2 highlights the potential for glamorization-based influence.

Quantifying the extent of celebrity influence on US nonmarital fertility is beyond the scope of this article. Research on culture or social networks is often hampered by data limitations, and this is an issue here too: no national data tracks individuals' celebrity culture exposure over 40 years, let alone pairs this with detailed fertility information. Nonetheless, this article's findings may be suggestive of whether and how media presentations of celebrity nonmarital fertility shape evaluative cultural schemas – and ultimately, behavior – in the general population.

3. Data and method

The University at Buffalo Institutional Review Board deemed this research exempt from ethics board review, as it is based on analysis of existing, publicly available data.

3.1 Celebrity data

Information about celebrities comes from *People* magazine, a celebrity weekly which, as noted earlier, was the most widely read print magazine in the United States for at least most of the past decade (Dool 2017; Johnson-Greene 2009), and which has an extremely popular website. While there are other celebrity magazines and, in the

Internet era, other popular celebrity news websites, this study relies on *People* for several reasons: It has been in continuous publication since March 1974 (far longer than any competing journal³), it is the most popular celebrity magazine, it does not publish fictional stories, and its headlines can be seen as reasonably representative of all celebrity news. Indeed, book-length studies of celebrity pregnancy drawing on numerous major sources of news (Cramer 2016; Douglas and Michaels 2004) identify as central most of the same mothers who appear most frequently on *People*'s cover, listed in Table 1. Because of *People*'s financial success – it is described as the “crown jewel” of its parent company, yielding revenues of over \$1 billion annually (Haughney 2014) – *People* has often been able to outbid other outlets for exclusive baby photos (Barnes 2008; Pérez-Peña 2008). It is thus possible that *People* provides slightly more or earlier coverage of baby news than other magazines – which also supports reliance on *People* as a key source of celebrity fertility news.

This study is concerned with celebrity fertility events primarily insofar as they might influence population trends. It therefore focuses on celebrity pregnancies and births that receive media attention; those kept secret from the public have no potential to influence public beliefs. Technically, then, I study apparent rather than actual celebrity fertility, but for ease of exposition I refer to this as celebrity fertility below. I do not study editorial decisions regarding which celebrities are featured, since, again, my interest is primarily in potential consequences of celebrity news, not its causes.

Table 1: Most commonly mentioned celebrity parents on cover of *People* magazine in stories about pregnancies, births/babies, and adoptions, 1974–2014

Rank order	Female (Number of covers in parentheses)	Male (Number of covers in parentheses)
1	Kate Middleton (23)	Brad Pitt (11)
2	Angelina Jolie (20)	Prince William (10)
3	Britney Spears (13)	Kevin Federline (6)
4	Julia Roberts (11)	Tom Cruise (6)
5	Princess Diana (9)	Jim Bob Duggar (5)
6	Katie Holmes (8)	Joel Madden (3; tie)
7	Madonna (8)	Kanye West (3; tie)
8	Gwyneth Paltrow (7)	Matt LeBlanc (3; tie)
9	Jennifer Garner (6)	Patrick Dempsey (3; tie)
10	Jessica Simpson (6)	Rene Angelil/Warren Beatty (3; tie)

³ For comparison, *In Touch Weekly* and *Life & Style Weekly* launched in 2002 and 2004, respectively (Carr 2004), and *Us* transformed from a monthly industry magazine to a celebrity weekly (*Us Weekly*) in 2000 (Kuczynski 1999).

People magazine covers, dating from the magazine's initial issue in March 1974 through to the end of 2014, were downloaded from the People.com website for coding (n = 2,158). Only covers were coded, with the reasoning that cover information is most likely to constitute what comes to be general public knowledge (especially for a magazine that is a fixture of supermarket checkout lanes and doctors' waiting rooms: people who do not purchase the magazine may nonetheless see cover information.) Two research assistants and I identified all cover stories presenting celebrities' pregnancies, births/babies, and adoptions, which totaled 385. This count does not include planned or longed for babies (n = 60); such hypothetical babies were excluded. Also excluded were stories about children aged one or above (n = 369): "babies" were defined as children younger than one year. Adoptions were included for initial coding since they are a form of family formation that can occur in- or out-of-wedlock, but, for comparability with national data, adoptions were not included in nonmarital birth ratio calculations.

The 385 *People* cover stories meeting inclusion criteria were coded for variables including event type (pregnancy, birth, or adoption); story type (lead story, non-lead story with photo(s), or text-only story); and parents' demographic characteristics, including race/ethnicity, level of education, and relationship status at time of the event (dating, engaged, married, or no relationship). For births, relationship status at conception was also noted, to enable easy identification of post-conception marriages, engagements, etc. To test intercoder reliability, two coders coded 12.33% of covers (266 of the 2,158). High Krippendorff's alpha coefficients confirm that there was widespread consensus on codings for all variables used in the present analyses (average alpha: .946; range: .908–.968).

Multiple stories about the same celebrity were coded as separate cases, since they sometimes pertained to different pregnancies/births or adoptions, and because each story constituted a new opportunity to present a celebrity fertility event to the public. In 80 cover stories (20.78%), the parents' relationship status was made explicit on the cover. In almost all other cases the relationship status was presented within the magazine, or could be deduced from prior covers about the celebrity. It is thus presumed that covers not explicitly conveying celebrities' marital status could contribute to relevant schemas. Internet searches were used to find celebrities' highest level of education.

Table 2 shows the characteristics of celebrity parents presented on *People*'s cover, both when including all cover stories and when including exactly one entry per mother or father. Mothers were much more likely to appear on *People* covers than fathers: among all 385 fertility- and adoption-related cover stories, mothers appeared (via picture and/or text) in 362 (94%), while fathers appeared in 163 (42%). (The total exceeds 385 due to stories including both parents.) Because maternal information is more complete in both celebrity and general population data, the analyses below focus

on mothers. Also, because no minority racial/ethnic group was well represented on *People's* cover, the subgroup analyses below focus on non-Hispanic whites, who constitute approximately 90% of celebrity parents. Certain analyses, identified below, were conducted first using all-story data (with, potentially, multiple entries per baby) and then using distinct-baby data (with one entry per baby). As noted below, findings were extremely similar in the two cases.

Table 2: Characteristics of celebrity parents on covers of *People* magazine, 1974–2014

	Mothers				Fathers			
	All stories (N = 362)		Distinct (N = 164)		All stories (N = 163)		Distinct (N = 96)	
	%	N	%	N	%	N	%	N
Event type								
Pregnancy	29.01	105			25.15	41		
Birth/Baby	62.43	226			67.48	110		
Adoption	8.56	31			7.36	12		
Race/ethnicity								
White (non-Hispanic)	91.69	331	88.96	145	91.41	149	90.63	87
Black (non-Hispanic)	2.77	10	4.88	8	6.13	10	6.25	6
Hispanic	3.32	12	3.66	6	2.45	4	3.13	3
Asian	0.55	2	1.22	2	0.00	0	0.00	0
Other	1.66	6	1.22	2	0.00	0	0.00	0
[Unknown]	–	1	–	1			–	1
Education								
< High school	9.50	32	7.69	11	8.61	13	11.11	10
High school dipl.	26.41	89	30.77	44	27.81	42	24.44	22
Some college	31.75	107	23.78	34	31.79	48	28.89	26
College degree	29.38	99	34.27	49	29.80	45	32.22	29
Graduate education	2.97	10	3.5	5	1.99	3	3.33	3
[Unknown]	–	27	–	21	–	12	–	7

Notes: "Distinct" data include exactly one entry per celebrity mother or father. Event type is not reported by distinct mother/father, as individual parents could experience more than one event (pregnancy, birth, or adoption) during the study period. Percentages are calculated with missing values excluded, i.e., the percentages shown total to 100.

3.2 National data

Annual nonmarital birth ratios for the period 1974–2014, for the US population overall and for specific demographic subgroups, were calculated using natality data from the National Vital Statistics System of the National Center for Health Statistics. Data from

1990 onward was obtained through the VitalStats website (http://www.cdc.gov/nchs/data_access/vitalstats/vitalstats_births.htm). Data from before 1990 (not available through VitalStats) was downloaded in Stata format from <http://www.nber.org/data/vital-statistics-natality-data.html>. For consistency with most government reports, births to foreign residents were excluded. Data on Hispanicity became available only in 1978. In all years, information on mother's education was sometimes missing. Usually, this was because educational information was omitted from the birth certificate and affected a very small percentage of cases (typically less than 2%). In some years, however, maternal education information was missing because the birth state used more than one form of birth certificate, or an obsolete birth certificate. The percentage of cases missing educational information peaked at 10%–17% in 2011–2013. National birth ratios for specific educational categories are thus based on partial (although still quite comprehensive) data.

3.3 Qualitative analyses

To assess how *People* has depicted nonmarital fertility events on its cover, an inductive, modified grounded theoretical analysis (Charmaz 2006) was conducted for the 385 cover stories pertaining to celebrity pregnancies, births, and adoptions, with a focus on those showing nonmarital events. Both cover images and text were reviewed and coded for features such as the emotional valence of the news, the pictured celebrities' facial expressions, how parenthood was presented (a source of stress? of great joy? of personal salvation?), the information presented alongside the announcement (e.g., for unmarried celebrities, were marriage plans mentioned?), and who precisely was presented or described (the mother? father? other family? friends?). Changes over time in *People*'s framings of nonmarital fertility were noted.

3.4 Quantitative comparisons

The US nonmarital birth ratio was compared graphically with the celebrity nonmarital birth ratio derived from *People* magazine covers (using distinct-baby data). Similar plots compared United States and *People* data for non-Hispanic whites, in toto and broken down by educational category (categorized as high school or less, some college, and college and above – more detailed breakdowns were inappropriate due to small cell sizes in the celebrity data). Outcomes of nonmarital conceptions among celebrities were also presented graphically. Where indicated, a 3-year lagged moving average was used

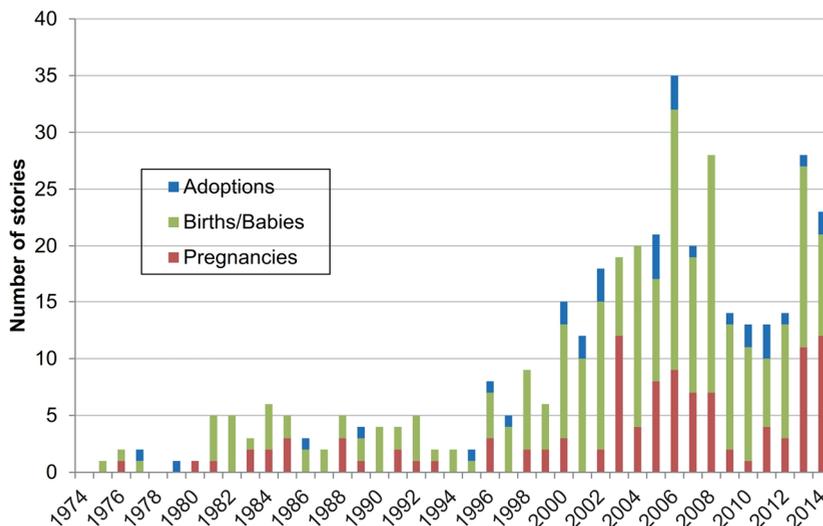
with *People* data to smooth year-to-year fluctuations and reveal longer-term trends. Quantitative analyses were conducted using Stata/MP 15.1.

4. Results

4.1 Celebrity baby-related *People* magazine covers, 1974–2014

Figure 1 shows the number of *People* magazine cover stories about celebrity pregnancies, births/babies, or adoptions between 1974 and 2014. Such stories were rare in the 1970s: none appeared in the first year of *People*'s existence, and no more than two appeared annually later in the decade. In the 1980s and 1990s the annual number of stories was somewhat higher, but always in the single-digits. In 2000 the number of stories began to spike, reaching 15 that year, peaking at 35 stories in 2006, and never falling below double-digits thereafter. The year 2000 could thus be considered a rough turning point in the rise of celebrity baby coverage in *People*. Given the rise of Internet news about celebrities at the same time, the later columns in Figure 1 could be considered as subject to an Internet multiplier effect – i.e., the rise in stories would be even higher if Internet news were included.

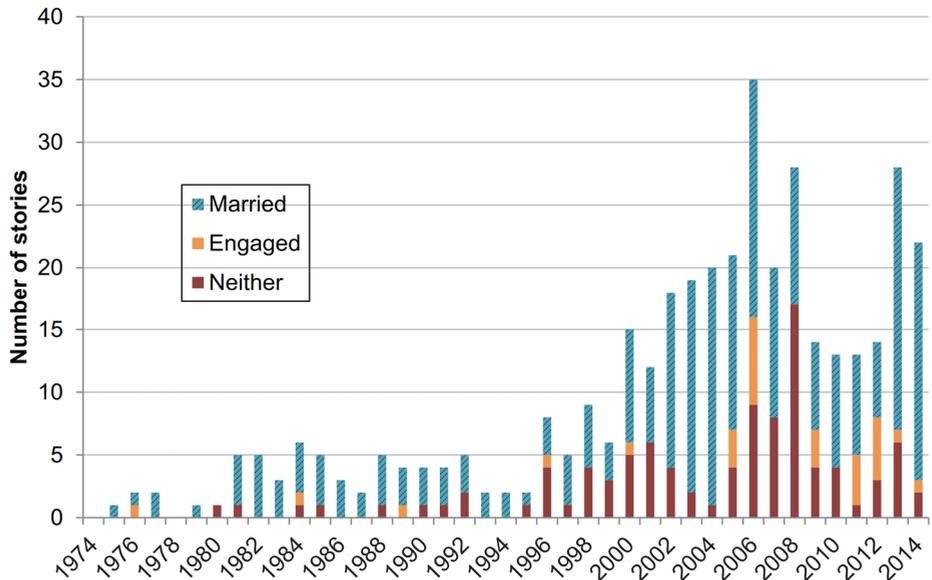
Figure 1: *People* cover stories pertaining to celebrity pregnancies, births/babies, and adoptions, 1974–2014 (N = 385)



The percentage of *People* cover stories that pertain to celebrity pregnancies, births/babies, or adoptions has risen in tandem with the count, peaking at 18% in 2006. The likelihood of such a story being a lead story – i.e., receiving a large center photo rather than being relegated to the cover’s margins – has increased over time, and has been above 50% in every year since 2005. Celebrity baby news has unambiguously increased in popularity and prominence over time.

Figure 2 presents the same stories as Figure 1, but indicates the relationship status of the parents at the time of the event. Even in the 1970s and 1980s, nonmarital fertility events were occasionally presented (a fact potentially relevant to glamorization-based celebrity influence). Nonmarital events appear more common in later years than in early years, in both absolute and relative terms – the percentage of nonmarital events reaches or exceeds 50% for several years in the 2000s – but the trend is non-linear. Notably, events occurring within engagements became more common in the last decade of the study period.

Figure 2: Relationship status at time of pregnancy, birth, or adoption (from stories on the cover of *People* magazine, 1974–2014; N = 385)



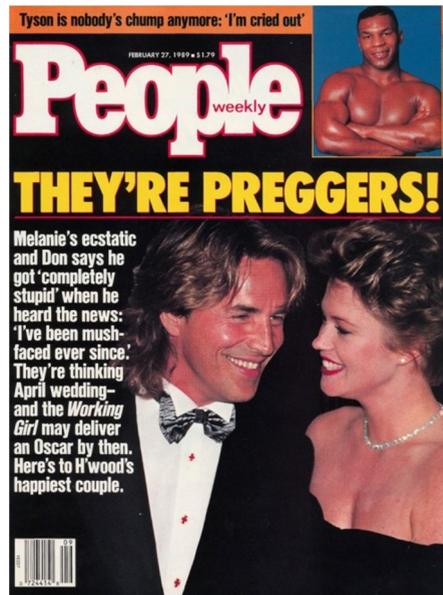
4.2 Presentations of nonmarital fertility

As mentioned, even in its first two decades of existence, *People* occasionally included cover stories about out-of-wedlock pregnancies or births. Indeed, *People*'s second-ever baby-related headline, and the first to feature a celebrity parent in a full-size cover photo, openly presented a nonmarital pregnancy: that of Goldie Hawn, who was shown smiling beside the caption: "She's laughin' with a baby and a new hubby on the way" (May 17, 1976; see Figure 3, left). Notably, her impending wedding (i.e., the "hubby on the way") was indicated immediately after mention of her pregnancy. Similarly, a 1989 cover (Figure 3, right) announced the nonmarital pregnancy of Melanie Griffith and Don Johnson, but explicitly noted plans for a pre-birth wedding ("They're thinking April wedding"). In both covers, the parents' happiness was underscored in the text ("laughin'," "ecstatic," "Hollywood's happiest couple"), and there was no hint of moral reproach.

Figure 3: Early depictions of nonmarital conceptions



May 17, 1976 (Volume 5, Issue 19)



February 27, 1989 (Volume 31, Issue 8)

Both this positive valence and the pairing of nonmarital fertility news with the promise of imminent (or recent) marriage were paradigmatic features of *People*'s

coverage of out-of-wedlock pregnancies through the mid-1990s. Thus, news about Michael Jackson's partner's pregnancy and the couple's marriage arrived in the same breath ("Baby on Board! The story behind Michael Jackson's surprise wedding to pregnant pal Debbie Rowe," [December 2, 1996]), and news of Nastassja Kinski's new baby was accompanied by notice of near-term wedding plans ("Kinski: A new mom & soon a bride" [July 23, 1984]). When nonmarital fertility occurred without plans for marriage, the stories were relegated to text-only or small-image headlines rather than appearing as the main story (e.g., "Hefner meets his unknown son" [December 5, 1983], and "A love child for FARRAH & RYAN" [October 15, 1984]). Implicitly, then, nonmarital conceptions or births appeared more worthy of attention and celebration when paired with immediate or recently achieved plans to marry.

An alternate strategy for legitimating an out-of-wedlock pregnancy or birth, which began appearing in the 1990s, was to present the baby as a vehicle for personal or familial salvation. Thus, a full-size picture of Princess Stephanie openly described her as "Single, Royal and Pregnant," but contrasted her "wild child" past with her reformed present: "'I'm ready,' she says. 'I have become much more responsible'" (June 15, 1992). Another full-size cover story presented Wynonna Judd's nonmarital birth as healing family rifts: "After years of family feudin', the Judds call a truce to welcome Wynonna's new baby. Elijah, says the proud mom, 'really brought us together'" (May 22, 1995). The cover included photos not only of Wynonna Judd but also of her mother and sister – suggesting that the baby was entering a nuclear family unit, even if not a traditional one of husband-and-wife. Indeed, stories about unmarried mothers were particularly likely to mention other figures in the mother's life, as if to highlight non-spousal social support (e.g., "Madonna *and her friends* talk about the happy arrival of little Lourdes Maria, 6 lbs. 9 ozs." [October 28, 1996], emphasis added).

In the late 1990s and early 2000s, nonmarital pregnancies or births were increasingly presented without promises of marriage or personal transformation. A 1999 headline straightforwardly announced, "Johnny Depp: A new love, a new baby, a hit movie" (December 13, 1999) – but Depp's picture was relegated to a corner of the cover. The first *People* cover to feature a nonmarital pregnancy in a large image without any mention of impending marriage was Katie Holmes and Tom Cruise's 2005 pregnancy announcement (October 24, 2005). Soon thereafter, however, Holmes and Cruise announced their wedding plans, which were mentioned in their next *People* cover (March 6, 2006). Their wedding, occurring when their daughter was an infant, was also cover news (December 4, 2006).

An arguable turning point in *People*'s treatment of nonmarital fertility came with Angelina Jolie's 2006 pregnancy. An early cover about Jolie and her partner Brad Pitt asked, "When will they wed?" (implying that the question was "when," not "if"), and described the couple as "moving so fast" (too fast?) (January 30, 2006; see Figure 4,

left). Jolie’s facial position, looking down and away from the camera, could be interpreted as a sign of bashfulness or shame, and no accompanying text assures us that she is “thrilled” or “ecstatic.” However, the implicit concern evinced on this cover quickly disappeared. Despite making no promise to marry, Jolie would appear on the cover of *People* six more times before the end of 2006. Jolie’s closed-framed face served as the main photo on both the “100 Most Beautiful” issue (May 8, 2006) and the issue announcing her first nonmarital birth (June 12, 2006). In both photos, Jolie gazes happily, directly, and unapologetically at the camera, and the text mentions neither her unmarried state nor any wedding plans (although the latter cover affirms her partnered status: “With Brad by her side...”). The many subsequent covers featuring the couple dropped the topic of marriage – but did present the couple as being in a committed relationship. The possibility of a Jolie-Pitt marriage would not be mentioned again on the cover of *People* until December 2012. (In 2014 the magazine would report on the couple’s engagement and marriage, and in 2016 on their separation.)

Figure 4: Later depictions of nonmarital conceptions



Post-2006 stories about nonmarital fertility typically made no mention of marriage – or sometimes alluded strongly to its irrelevance. This was true for both white and

minority parents (the latter of whom were just beginning to appear in appreciable numbers. Twenty-two of the 30 *People* covers featuring non-white mothers were published between 2007 and 2014). The first cover featuring an unmarried black mother-to-be, Halle Berry, described a smiling Berry as “joyful,” and implied that her pregnancy with her boyfriend ended “years of heartbreak” (September 17, 2007).⁴ A cover announcing the “blessed news” that a “stoked” Matthew McConaughey was expecting a child with his girlfriend Camila Alves (January 28, 2008; Figure 4, right) not only did not mention wedding plans but appeared to transform the sometimes-stigmatizing phrase “love child” into a mark of the couple’s mutual love, and a point of pride: “This, [McConaughey] told his mom, ‘is a love child.’” The birth of unmarried Nicole Richie’s son was described as making Richie, her partner, and their daughter into “one big happy family” (November 2, 2009; see also the redemptive caption beside Richie after her first birth in Figure 4, right corner).⁵ Marriage was not altogether forgotten – e.g., the July 1, 2013 cover about Kim Kardashian’s first birth asked, “Will Kanye [West] ever marry her?” – but such concerns were now decidedly rare.

In sum, *People* magazine has, with few exceptions, presented nonmarital fertility events in a positive light. Even in the 1970s and 1980s, nonmarital pregnancies were generally presented as happy events occurring to good people – although the pregnancies were usually announced in tandem with plans for pre-birth weddings, as if to reassure that the child would be raised by married parents. *People*’s manner of destigmatizing nonmarital fertility changed over time (especially after the mid-2000s), relaxing the preference for shotgun weddings and instead highlighting out-of-wedlock childbearing as a form of personal salvation, joyful familial consolidation, or expression of parental love. The emotional valence of such news remained consistently positive throughout the study period (although it should be noted that presentations of children born to entirely unpartnered mothers remained rare).

While this analysis is limited by reliance on a single (albeit extremely popular) news source, other studies suggest that such findings hold for celebrity news generally: Douglas and Michaels mention that “Hollywood’s unmarried mothers were profiled approvingly in the glossies” (2004: 182), and Cramer finds evidence of widespread “acceptance” and even “celebrat[ion]” of unmarried celebrity mothers (2016: 159–160).

⁴ Halle, who is biracial, identifies and is typically presented in the media as black (James 2011).

⁵ Both McConaughey and Richie would go on to marry their partners after their second child’s birth, thus modeling what Holland has termed “Capstone marriage” (Holland 2017). The intention to marry was not expressed until well after their firstborns’ births, however.

4.3 Adoptive and same-sex parenting

Between 1974 and 1995, all five adoptions mentioned on *People's* cover occurred within marriage. After 1995, adoption increasingly became a route to nonmarital parenthood for celebrities, with 17 of 26 adoptions in this period (65.4%) occurring (i.e., being finalized) out of wedlock. *People* did not necessarily advertise single-parent adoptions as such, however. Covers frequently did not make clear that unpartnered adoptive parents were single, and stories about them were often relegated to the cover's margins (e.g., "Sharon Stone's New Baby" (May 30, 2005); "Connie Britton: Meet My Baby!" (December 5, 2011)). A lead story featuring Sandra Bullock with her "new joy" of an adopted son did explicitly present her as a "sexy single," but also made clear that she had split recently from her husband (with whom she had begun the adoption process) (August 30, 2010). Similarly, Angelina Jolie's first adoption was presented to *People* readers as initiated within marriage (March 25, 2002). Covers about Jolie's two subsequent adoptions acknowledged that she was unmarried, but more often than not referred to or pictured her partner Brad Pitt (e.g., carrying the adopted child on his shoulders; May 8, 2006). Overall, *People* appeared more comfortable presenting adoptions that occurred (or began) within relationships than those initiated by unpartnered parents.

Apart from Sandra Bullock, the only adoptive parent explicitly presented on a *People* cover as "single" was Rosie O'Donnell (June 19, 2000). However, it is now known that O'Donnell was in a same-sex relationship at the time; indeed, a 2002 *People* cover announced that "she's gay, she's happy and she's very much in love" (March 3, 2002). Active masking of a same-sex relationship also occurred in the case of Jodie Foster, whose first pregnancy announcement featured the large headline, "AND BABY MAKES 2!" and described Foster as preparing "for life as a single parent" (March 23, 1998). As is now widely acknowledged in her biographies, however, Foster was in a committed same-sex relationship at the time. These in-retrospect misleading headlines suggest that, until the turn of the century, single parenthood was viewed (by *People's* editors and/or by some celebrities themselves) as more socially acceptable than gay parenthood.

In 40 years' of pregnancy-, birth-, or adoption-related *People* covers, only two explicitly presented gay parents as such: Clay Aiken (October 6, 2008) and Neil Patrick Harris (January 10, 2011). At least eight other covers showed parents now known to have been in same-sex relationships but who were not identified as such.

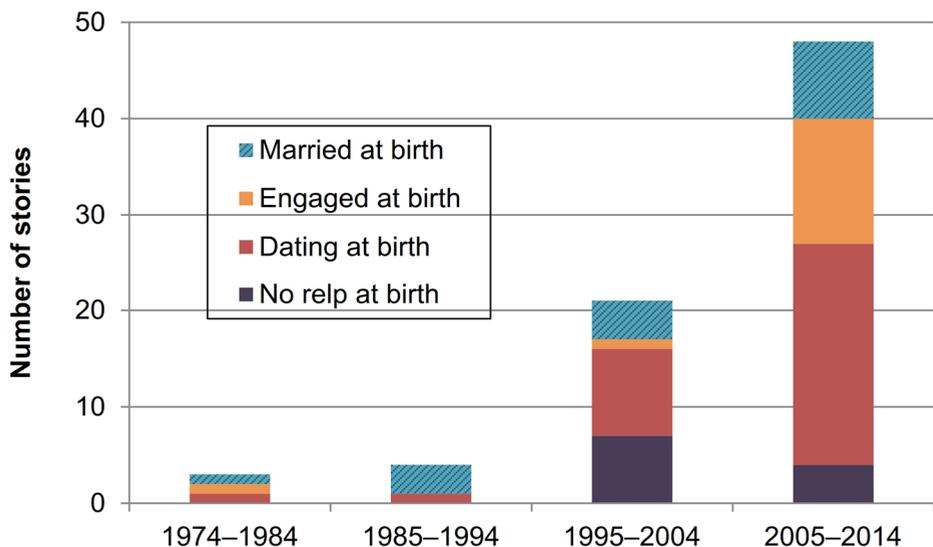
Overall, *People's* primary approach to dealing with some controversial forms of family formation, including single-parent adoption and same-sex parenting, involved silence or concealment rather than direct critique. (Other controversial fertility-related topics also received little direct attention, e.g., only one cover in 40 years mentioned abortion.) Current data cannot clarify whether such strategies originated with *People's*

editors or with the celebrities themselves. Regardless, *People's* direct and positive presentation of nonmarital conceptions since the mid-1970s and of nonmarital births since roughly 2006 is all the more striking when it is contrasted with these examples of omission or obfuscation.

4.4 Relationship responses to celebrity nonmarital conceptions

Between 1974 and 2014, *People* magazine presented 79 cover stories about celebrity babies who had been conceived out of wedlock. For three of these the parents' relationship status at the baby's birth could not be determined. For the remaining 76 cases, parental relationship status at birth is shown in Figure 5, by decade.⁶

Figure 5: Parental relationship status at birth, for nonmarital conceptions from *People* magazine covers, 1974–2014 (N = 76)



⁶ Figure 5 includes duplicate stories about individual babies. A figure including one entry per baby (N=56; available upon request) shows extremely similar relative proportions of marriage, engagement, etc. For example, the percentages of shotgun weddings and engagements in 2005–2014 in the distinct-baby data were 17.2% and 27.6%, respectively, compared to 16.7% and 27.1% in the all-stories data.

The number of nonmarital conceptions was very low in the first two decades of the study period, but then rose, reaching 21 stories between 1995 and 2004 and 48 stories between 2005 and 2014. Between 1974 and 1994, examples of celebrities who did not marry before their child's birth were rare, but existed. By the second half of the study period, outcomes other than marriage were clearly the norm: Fewer than 20% of nonmarital conceptions resulted in pre-birth weddings. However, few celebrity mothers found themselves parenting entirely without a partner: 33.3% in 1995–2004 and 8.3% in 2005–2014. Instead, most mothers experiencing nonmarital conceptions were dating or engaged at the time of the birth. In particular, the proportion that was engaged has risen, reaching 27.1% in 2005–2014. Celebrities may be modeling an alternative to shotgun weddings: 'shotgun engagements.'

Supplementary analyses reveal an educational gradient in post-conception marriages/ engagements. Among non-Hispanic white celebrities in 2005–2014 (using all-stories data) the percentage of nonmarital conceptions ending in engagement by the baby's birth was 46.7%, 26.7%, and 14.3% for women with high school or less, some college, and college degree or more, respectively. In the same period, marriage has been the modal response to nonmarital conceptions among celebrities with college degrees (71.4%), while remaining quite rare among those with less education (6.7% for those with high school or less). Similar educational differences were observed in distinct-baby data. Thus, celebrities' wealth and high social status do not erase educational gradients in their family formation behaviors: marriage remains a more common response to nonmarital conception among more educated celebrities, while engagement is a more common response among the less educated.

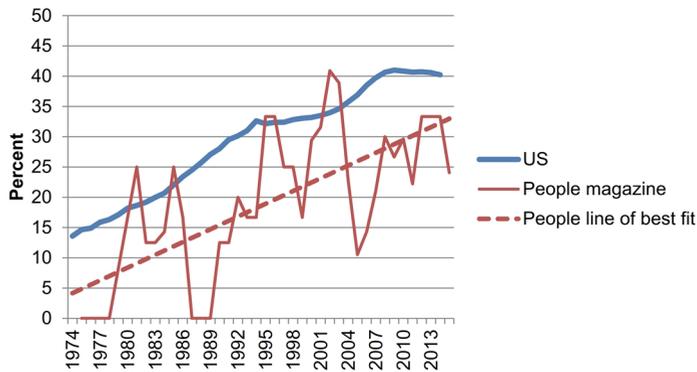
4.5 Celebrity vs. general population nonmarital birth ratios

To compare general population and *People* magazine nonmarital birth rates, a series of graphs are presented (calculated with distinct-birth data, i.e., with one entry per baby). Figure 6, top, plots the percentage of births occurring to unmarried women for the United States as a whole (thicker blue line) and for celebrities featured on the cover of *People* (thinner red line); a best-fitting trendline is also provided for the *People* data (dotted red line). While the *People* line is jagged, with large peaks and valleys, it nonetheless almost always falls below the general population line; correspondingly, the *People* line of best fit is substantially below the US line. Overall, the *People* nonmarital birth ratio during this 40-year period was substantially lower than that for the whole population. Although the number of presented celebrity births is low before the year 2000, data from the last 15 years yields similar conclusions: In 2000–2014, 38.1% of

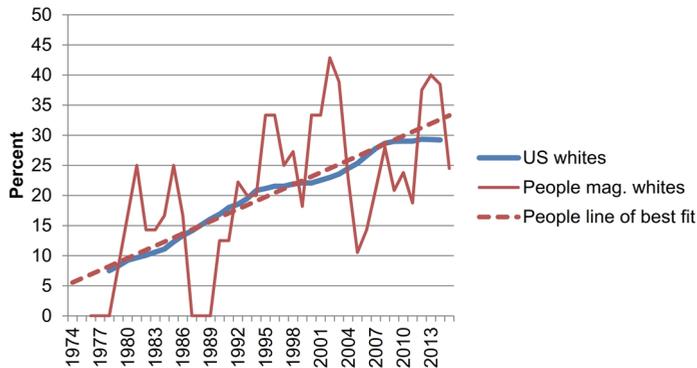
births in the United States occurred to unmarried women; among celebrities presented on *People*'s cover the comparable figure was 10 points lower, 27.9%.

Figure 6: Percentage of nonmarital births on *People* magazine covers versus in the United States, for all women (top) and non-Hispanic white women (bottom), 1974–2014

All women



White (non-Hispanic) women



Notes: *People* data graphed as a 3-year lagged moving average. Data comprise 1 entry per baby born.

As noted earlier, approximately 90% of *People*'s celebrity mothers are white. A more apt comparison, then, may restrict the data to non-Hispanic white mothers, both celebrity and non-celebrity. Such a comparison is shown in Figure 6, bottom. (Because

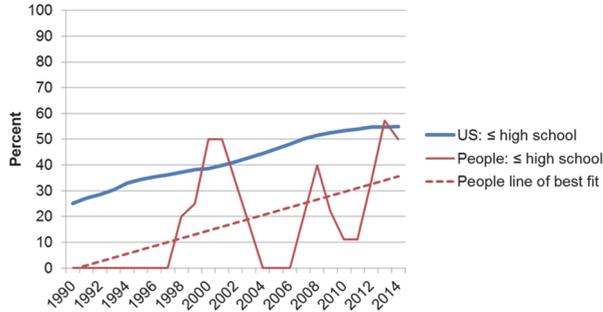
People presented minority celebrities relatively rarely – and because their nonmarital birth ratios were close to those of white celebrities – the celebrity portion of the graph changes minimally when restricted to whites.) In this case it appears that, smoothing over peaks and valleys, white celebrities have had nonmarital birth ratios very similar to general population whites: the *People* trendline is strikingly close to the non-celebrity line. Between 2000 and 2014, average annual nonmarital ratios were nearly identical for celebrities and non-celebrities: 26.1% and 26.6%, respectively. Graphs calculated using all-story data (i.e., allowing multiple entries per celebrity birth) look extremely similar to those shown here.

Figure 7 compares *People* and general population birth ratios for non-Hispanic white women by level of education⁷ (calculated using distinct-birth data; again, graphs based on all-story data look extremely similar; available upon request). Years before 1990 have been omitted due to large numbers of empty cells in the *People* data. An interesting pattern can be observed. For white women with a high school degree or less, nonmarital childbearing was less common among celebrities than among non-celebrities in nearly all years (Figure 7, panel a). For white women with some college or with college degrees, however (panels b and c), nonmarital childbearing was generally more common among celebrities than non-celebrities. In recent years, differences between celebrity and non-celebrity rates appear to be decreasing for college-educated women. Nonetheless, through most of this time period, white celebrities who attended at least some college have had substantially higher rates of nonmarital childbearing than their non-celebrity peers. It is thus arguable that in this demographic subgroup – which is not small: in 2014 approximately 38.1% of US births occurred to white women with at least some college education – celebrities may have created perceptions of higher nonmarital fertility rates than women would have inferred from their ‘real-life’ peer groups alone. If this helped destigmatize nonmarital childbearing in this group, then celebrity news may have contributed to the attenuation of the educational gradient in out-of-wedlock childbearing (Solomon-Fears 2014).

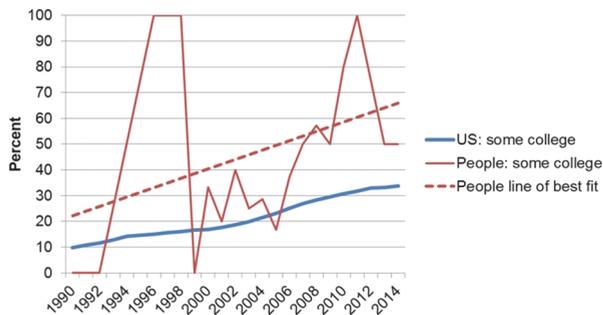
⁷ While most celebrities are wealthy, wealth does not fully explain or erase public assessments of celebrities’ social class. Contrast, e.g., popular depictions of Britney Spears as “trailer trash” with presentations of Jennifer Garner as a “girl next door,” or of Gwyneth Paltrow as patrician (Cramer 2016: 62–64; cf. Podnieks 2012). I here use celebrity level of education as an admittedly rough marker of such differences in class background, which may affect laypeople’s perceptions of social similarity with celebrities.

Figure 7: Percentage of nonmarital births on *People* magazine covers versus in the United States, for white non-Hispanic women by level of education, 1990–2014

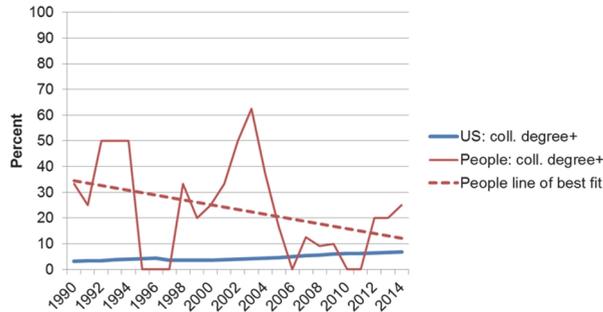
a) High school or less (non-Hispanic white mothers only)



b) Some college (non-Hispanic white mothers only)



c) College degree or more (non-Hispanic white mothers only)



Notes: *People* data graphed as 3-year lagged moving average. Data comprise 1 entry per baby born.

If ‘trendsetters’ are those who widely adopt a behavior earlier than the rest of the population, then celebrities cannot be considered nonmarital fertility trendsetters for the United States as a whole, nor for non-Hispanic white women as a whole. However, among white women with at least some college education, celebrity nonmarital birth ratios were consistently higher than those of non-celebrities; in this group, celebrities could be described as trendsetters. One may speculate that this was the demographic group Dan Quayle was closest to and hence most concerned about (although at the time of his anti-Murphy Brown comments, in 1992, media coverage of pregnancy- and baby-related stories was still relatively rare).

I underscore that celebrities need not, in the aggregate, be trendsetters in this quantitative sense to contribute to destigmatization of nonmarital fertility. Even rare cases of out-of-wedlock childbearing could, if presented in a positive light, open cognitive space for the acceptability of this form of family formation (just as a small number of openly transgender celebrities might suffice to help destigmatize transgenderism (Day 2015)). Although relatively highly educated white women were the most likely target of prevalence-based celebrity influence, the highly appealing narratives of nonmarital fertility provided by celebrity news had the potential to also shape other groups’ evaluative schemas, via glamorization-based influence.

5. Discussion

American society has a long-standing fascination with celebrities (Marshall 2006), and a more recent fascination specifically with celebrity pregnancies and babies. In this study I argue on both empirical and theoretical grounds that celebrity culture could be a powerful contributor to changing schemas of parenthood and marriage, and ultimately to changing demographic trends such as the rise in US nonmarital fertility. Drawing on social network and cultural theories, I propose two mechanisms by which celebrities could shape demographic norms: prevalence-based influence (in which celebrities’ high social visibility leads observers to believe that behaviors modeled by celebrities are common and hence normal) and glamorization-based influence (in which particularly positive presentations of celebrity behaviors contribute to their destigmatization). Such effects need not be limited to celebrities’ self-professed fans, given the strong evidence of individuals’ unconscious environmental monitoring. Medical researchers describe an ‘Angelina effect’ in medicine (referring to Angelina Jolie raising awareness of preventive mastectomies (Borzekowski et al. 2014)); demographers may wish to consider an analogous ‘celebrity effect’ on societal beliefs about family formation.

This study’s primary empirical goal was to evaluate how (and to what extent) US news stories have presented celebrity nonmarital fertility over the past several decades,

relying on *People* magazine cover stories, 1974–2014. Findings show that the number of *People* cover stories pertaining to celebrity pregnancies, births/babies, and adoptions rose appreciably over the study period, with a particularly striking rise since the year 2000. Qualitative analyses show that *People* has presented the vast majority of celebrity nonmarital fertility events – even those occurring in its earliest years of publication – as joyful and morally unproblematic. The presumption that parents conceiving out of wedlock would marry before or soon after the child’s birth gradually disappeared from the magazine (especially after 2006), replaced by narratives of nonmarital childbearing as a vehicle for personal salvation or family unification, or as an expression of parental love. Unpartnered mothers, whether biological or adoptive, and same-sex parents were not celebrated to the same extent as their heterosexually partnered peers, but marriage itself was no prerequisite for favorable coverage of baby news.

Importantly, however, *People*’s celebrity mothers have overwhelmingly been wealthy, non-Hispanic whites. As Douglas and Michaels argue, late 20th century media coverage of nonmarital fertility often diverged along racial and socioeconomic lines: “If you were really rich, famous, beautiful, and white, being an unmarried mom was way cool. If you were poor and black, it was degenerate” (2004: 182). While 21st-century *People* included some positive presentations of unmarried non-white mothers (e.g., Halle Berry; Nicole Richie – admittedly both mixed-race and light-skinned), non-whites remained rare on its covers. The potential for celebrity-influenced glamorization of nonmarital childbearing may thus be higher among whites than other groups.

Among celebrities conceiving out of wedlock – whose number grew substantially in the second half of the study period – only a minority (about 20%) married before their child’s birth. Instead, a growing proportion declared themselves engaged, thereby modeling an alternative to shotgun weddings: shotgun engagements. If emulated in the general population, this shift from post-conception marriages to engagements could be a specific mechanism by which nonmarital fertility has risen.

Celebrity parents who eventually married took a variety of paths to marriage, which can be described using Holland’s (2017) typology of marriage patterns: Until the mid-2000s, Birth-Related Legitimizing marriages were common (as when Tom Cruise and Katie Holmes married less than a year after their daughter’s birth); thereafter, Capstone marriages were increasingly common (as when Angelina Jolie, Nicole Richie, and Matthew McConaughey each married after having two or more children). Holland (2017) finds that post-first-birth marriages have become increasingly common in the United States, but not in many European countries; future research could explore how local celebrity cultures might relate to such cross-national differences.

Comparison of nonmarital birth ratios for celebrities featured in *People* and for the United States overall showed that celebrities have had lower rates of nonmarital childbearing than the general population, similar rates to non-Hispanic whites, and

higher rates when the comparison is restricted to non-Hispanic white women with at least some college education. The readers of *People* magazine fall largely into this last category: 70% of the magazine's readers are female and 80% have at least some college education (People.com 2011). (*People* provides no direct information about reader race/ethnicity, but the preponderance of non-Hispanic whites on its covers suggests that the modal reader is white.) Celebrity influence on nonmarital fertility thus appears particularly plausible for college-attending white women, at least through prevalence-based mechanisms (and perhaps through glamorization-based mechanisms too, if demographic similarity to featured celebrities predicts the likelihood of social influence). As for cultural conservatives' critiques that celebrities are non-normative in terms of nonmarital childbearing, the accuracy of such claims depends on which social group defines the norm. Celebrities could be presented as trendsetters, trend-followers, or trend-laggards, depending on choice of comparison group. (In Dan Quayle's likely social milieu – white and middle-class – the celebrities-as-trendsetters argument has been strongest.)

The association between education and nonmarital fertility is different among celebrities than in the general population. Rather than nonmarital birth ratios being highest among the least educated (as they are both in the United States and in many European countries (Perelli-Harris et al. 2010)), nonmarital fertility is highest among those with moderate levels of education (i.e., some college). This pattern may indicate that level of education is less reflective of parental or peer social class for celebrities than for the population at large. Perhaps some celebrities who would not ordinarily enroll in college do so to take acting or music classes, and perhaps others who have achieved early life professional success do not complete degrees but nonetheless take on the cultural values of those with higher education. However, education does remain salient for celebrities in the context of their responses to nonmarital conceptions. Celebrities with college degrees are substantially more likely to engage in shotgun weddings than their less educated peers, who in turn are more likely to announce engagements before their child's birth. Fame and wealth do not appear to fully erase educational differences in marriage-related decisions.

It is admittedly challenging to make strong causal claims regarding the extent of celebrity influence on demographic trends. The present study cannot prove that media depictions of celebrity fertility contributed to rising rates of nonmarital fertility, but it provides some suggestive evidence: Depictions of celebrity nonmarital fertility have been long-standing, increasingly numerous, and very consistently favorable, and likely depict higher rates of nonmarital fertility than those seen by many typical readers in their immediate social groups. The potential for glamorization-based and (at least for some groups) prevalence-based celebrity influence is present. Lack of strong causal claims notwithstanding, this study identifies specific patterns (such as the rise in post-

conception engagements) and narratives (such as of nonmarital childbearing as a source of personal salvation) that could help build theories or shape empirical inquiries at the intersection of demography and cultural studies.

Kearney and Levine's (2015) study of the MTV show *16 and Pregnant* suggests a potentially promising manner of moving toward casual analysis of links between popular culture and demographic patterns. The study combines geographic natality data with television ratings and Google/Twitter search terms to test whether and how much local viewership of the show predicts reduction in local teen pregnancies. Techniques to address endogeneity – a consistent concern in studies of fertility dynamics (Huinink, Kohli, and Ehrhardt 2015) – are included. However, because such an approach is applicable only to recent, Internet-era events, it could not be used in the present study.

Bachrach supports the idea that big data, including Internet-generated data, could fuel demographic studies of culture, and further argues that any “adequate model of culture” should “permit quantification” (2014: 18). The utility of a quantifiable version of culture to demography – a field based on quantitative methods – is clear. However, I would argue that true engagement with culture will require demographic researchers to sometimes work qualitatively, to inductively reveal behavioral or narrative patterns that may be overlooked if relying on predetermined categories or data mining. As social media scholars note, algorithmic analyses of texts including (but not limited to) tweets “tend to miss out on some of the important contextual clues that humans are more easily able to detect” (Poorthuis et al. 2016: 264). Qualitative cultural analyses are not a second-rate substitute for quantitative ones, but a parallel contribution, providing levels of nuance that the latter cannot.

Celebrity culture could be salient to demographic trends in many ways not explored in this study. For example, celebrity news might affect nonmarital fertility not only by directly changing perceptions of the prevalence or acceptability of out-of-wedlock childbearing, but also indirectly, by reducing the attractiveness of marriage. While current data does not permit precise calculation of celebrity divorce rates, the overall impression from reviewing 40 years of *People* covers is that divorce is extremely common among US celebrities. Benson and Azim (2016) have estimated that for celebrities popular in the United Kingdom, the divorce rate is double that of the general UK population. By presenting marriage as something extremely fragile and difficult to sustain, celebrity news may contribute to the general population retreat from marriage.

In short, there are ample reasons to suspect that celebrity culture may affect contemporary beliefs and behaviors pertaining to fertility, marriage, and family. The growing movement to study culture and social networks as factors in demographic processes could benefit from deeper engagement with celebrity culture.

6. Acknowledgements

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