

Original Article

Fertility intentions in young Danish adults

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ABSTRACT

INTRODUCTION. Fertility rates are declining worldwide, including in Denmark. We investigated fertility intentions in young Danish adults.

METHODS. In a cross-sectional study based on the Danish National Birth Cohort, we investigated the wish for children, the desired number of children and the preferred ages for having first and last child among 20,594 women and 11,526 men aged 20-28 years.

RESULTS. Among women, 81.1% wished to have children, 7.8% did not want children and 11.1% were unsure. Among men, 79.9% wished to have children, 8.7% did not and 11.3% were unsure. The average number of children desired among those who wished for children was 2.46 (SD: 0.6) for women and 2.43 (SD: 0.7) for men. The preferred age at first and last birth was 27.3 (SD: 2.2) and 32.9 (SD: 3.1) years in women and 28.4 (SD: 2.2) and 34.0 (SD: 3.7) years in men, respectively.

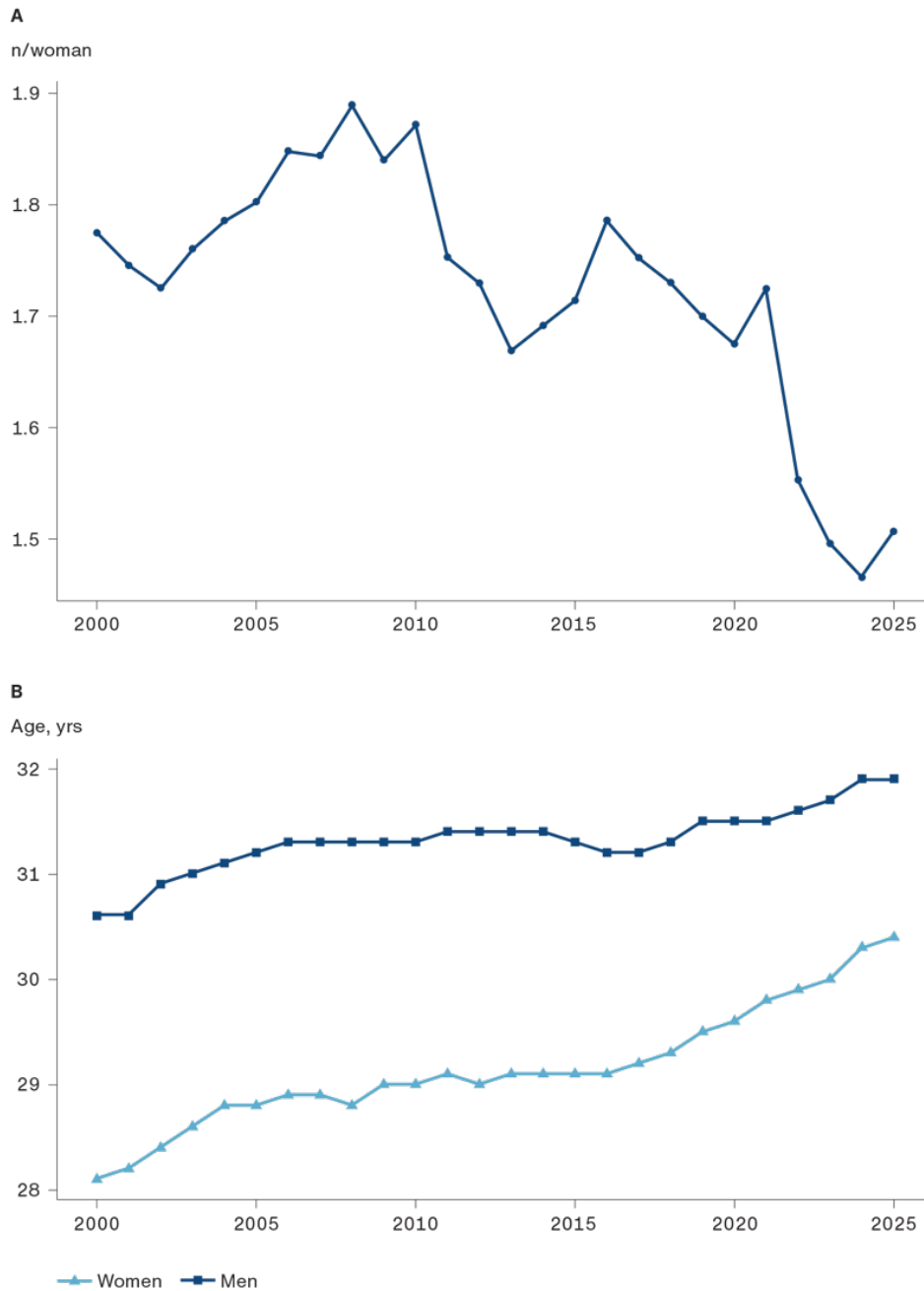
CONCLUSIONS. Fertility intentions among young Danish adults remain positive but conflict with observed fertility trends, suggesting a gap between desired and achieved fertility. This highlights the potential for policy interventions that address constraints emerging over the life course to impact the declining fertility rate.

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TRIAL REGISTRATION. Not relevant.

In recent decades, fertility has declined globally and in Denmark (**Figure 1 A**), where the total fertility rate declined from about 1.8 in 2000 to 1.5 children per woman in 2025 [1]. Low and declining fertility accelerates population ageing and may impact the long-term economic sustainability of social security systems [2].

FIGURE 1 Trends in Denmark, 2000-2025. **A.** Total fertility rate in Denmark: live births per woman. **B.** Mean age at first birth in Danish women and men.



A considerable part of the fertility decline may be attributable to the postponement of the first child [3]. Even if cohort fertility (the average number of children that women or couples eventually have over their life course) is stable, period measures such as the total fertility rate may decline if births are postponed to higher ages [4]. The mean age of first-time mothers in Denmark was 30.4 years in 2025 compared to 28.1 years in 2000 (Figure 1 B). A similar pattern has been observed for Danish men: in 2025, the mean age of first-time fathers was 31.9 years, compared with 30.6 years in 2000 [1].

Beyond postponement, extensive European evidence has observed a persistent gap between desired and achieved fertility, i.e., the fertility gap [5, 6]. Across cohorts, individuals and couples consistently report wishing

for more children than they ultimately have. This gap has been observed across Europe and suggests that low fertility is driven not only by declining preferences but also by constraints that limit the realisation of fertility intentions [5]. From a societal perspective, this implies that low fertility may reflect unmet reproductive goals rather than a lack of desire for children.

Previous studies in small, selected groups of young Danish adults showed that most wish to have children, and they typically desire to have two to three children [7-9]. However, young men are poorly represented in these previous studies, which consist primarily of Danish women, except for 79 male college students [7] and around 90 young men primarily from the Capital Region [8]. Moreover, the current development raises the question of whether young adults' wishes and intentions regarding children reflect recent fertility patterns or a persistent fertility gap. The aim of this study was to examine fertility intentions in a large, contemporary cohort of young Danish adults in their twenties - the formative years for reproduction.

Methods

This study is based on data from the fertility project BIOSFER (Untangling biologic and social causes of low fertility in modern societies), which builds upon the Danish National Birth Cohort (DNBC) [10, 11].

Study population

The DNBC is a nationwide study that has followed Danish women and their children for 30 years [10]. The DNBC ran from 1996 to 2002, during which period more than 90,000 pregnant women with more than 100,000 pregnancies were recruited through general practitioners at their first prenatal visit. All Danish-speaking women with a clinically confirmed pregnancy and the intention to complete the pregnancy were eligible for participation. Approximately half of all general practitioners in Denmark participated in the recruitment, and around 60% of the invited pregnant women agreed to participate. Almost 30% of all live-born children in Denmark during these years were included in the DNBC [11].

From April 2024 to June 2025, all young adults born to mothers included in the DNBC were invited via a secure mailing system facilitated by the Danish Authorities (e-Boks) to complete the comprehensive BIOSFER questionnaire on demographics, health, fertility intentions and more. The young adults were all born between 1996 and 2003; hence, they were between 20 and 28 years old when they received the questionnaire. In total, 32,120 participants (20,594 women and 11,526 men) completed the questionnaire, either fully or partially, out of 88,873 invited, corresponding to a participation rate of 36%.

Fertility intentions

An overview of the questions and response options (inspired by the Swedish Fertility Awareness Questionnaire) is presented in [Supplementary Table S1](#). The participants were asked: *“Do you want to have children/more children?”* and response categories were *yes, no, I already have the children I want, and don't know*. The participants reporting to be pregnant or to have a pregnant partner with an intent to complete the pregnancy (2%) and those reporting to already have the children they wanted (0.3%) were assigned to the group reporting *yes* to the question *“Do you want to have children/more children?”* Those who wanted to have children or reported being pregnant were further asked: *“How many biological children do you wish to have in total?”* Response categories included *one through six children or more; don't know; I can't have biological children; prefer not to answer*. Further, those participants were also asked: *“At what age would you like to have (or have had) your first biological child?”* and *“At what age would you like to have (or have had) your last biological child?”* Here, they provided their preferred age in whole years.

Statistical analysis

To contextualise fertility intentions, we stratified results by sex and age groups. Due to the composition of the DNBC, very few adults were 20 or 28 years old when answering the questionnaire, and these were grouped with adults being 21 and 27 at the time of answering the questionnaire. Results were therefore presented in the following age groups: 20/21, 22, 23, 24, 25, 26 and 27/28 years.

We reported the proportion wanting to have children, the desired total number of children and the preferred timing of first and last child, measured as described in [Supplementary Table S1](#) for those not having children and for those already having children. All results were provided based on complete cases, as item-level missingness was low across outcomes. Analyses were conducted in Stata 18.0, with adherence to the General Data Protection Regulation (GDPR). Figures were created using RStudio.

Ethics approval

The Committee for Biomedical Research Ethics in Denmark approved the data collection in the DNBC (KF 01-471/94). Furthermore, the Danish Data Protection Agency (2022-0367531, number 3069) and the Steering Committee of the DNBC (2025-07B) approved this study.

Trial registration: not relevant.

Results

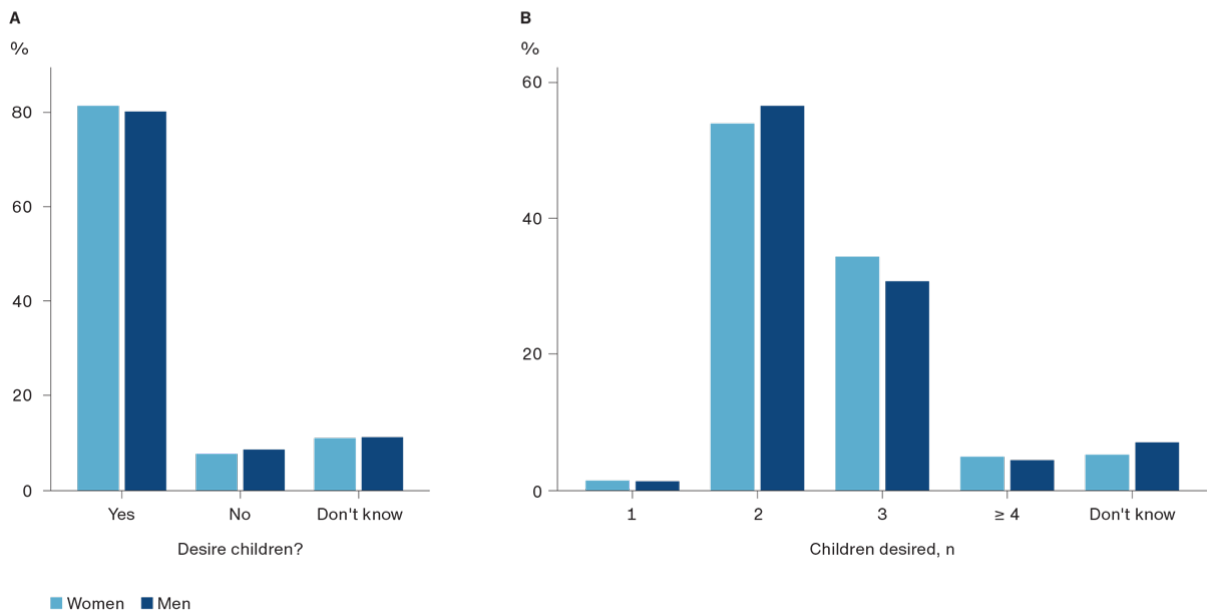
Baseline characteristics for the study population are shown in **Table 1**. Mean age at questionnaire completion was 23.6 years (SD: 1.5 years) in women and 23.5 years (SD: 1.5 years) in men. Most young adults had finished high school (32%) and were studying (58%) at the time of the questionnaire. Most stated to be cisgender (95%) and heterosexual (87%). Fewer women than men did not have a partner (36% versus 46%). In total, 3.7% of women already had a child, 2.3% were currently pregnant, and 12% had previously been pregnant. In total, 1.5% of men already had a child, 1.4% had a pregnant partner, and 9% had previously had a pregnant partner (Table 1).

TABLE 1 Baseline characteristics for 32,120 women and men in the Danish national Birth Cohort, 1996-2025.

	Women (<i>N_w</i> = 20,594 (64.1%))	Men (<i>N_m</i> = 11,526 (35.9%))	Missings, %
Age, mean (SD), yrs	23.6 (1.5)	23.5 (1.5)	0
<i>Parental socioeconomic position, n (%)</i>			≈ 5
High-grade professional	4,684 (24.0)	3,017 (27.6)	
Low-grade professional	6,371 (32.6)	3,596 (32.9)	
Skilled worker	5,248 (26.9)	2,667 (24.4)	
Unskilled worker	2,582 (13.2)	1,271 (11.6)	
Student	474 (2.4)	285 (2.6)	
Economically inactive or unclassified	174 (0.9)	79 (0.7)	
Maternal age at birth, mean (SD), yrs	30.0 (4.3)	30.2 (4.3)	0
Paternal age at birth, mean (SD), yrs	32.2 (5.1)	32.4 (5.1)	≈ 1
<i>Highest completed educational level, n (%)</i>			0
Primary or lower secondary school	928 (4.5)	788 (6.8)	
Higher secondary school	12,746 (61.9)	7,233 (62.8)	
Longer education	6,920 (33.6)	3,505 (30.4)	
<i>Current occupation, n (%)</i>			0
Student	12,487 (60.6)	6,279 (54.5)	
Employed or self-employed	5,076 (24.6)	3,832 (33.2)	
Other	3,031 (14.7)	1,415 (12.3)	
<i>Sexual orientation, n (%)</i>			≈ 7
Heterosexual	16,335 (84.5)	9,746 (91.4)	
Homosexual	275 (1.4)	230 (2.2)	
Bisexual	1,810 (9.4)	397 (3.7)	
Other	913 (4.7)	285 (2.7)	
<i>Gender, n (%)</i>			0
Cis female	19,676 (95.5)	0	
Cis male	0	10,786 (93.6)	
Other	918 (4.5)	740 (6.4)	
<i>Having a partner?, n (%)</i>			≈ 13
Yes, cohabiting	8,351 (46.0)	3,336 (34.3)	
Yes, not cohabiting	3,363 (18.5)	1,897 (19.5)	
No	6,452 (35.5)	4,493 (46.2)	
<i>Having a child/children?, n (%)</i>			0
No	19,830 (96.3)	11,352 (98.5)	0
Yes	764 (3.7)	174 (1.5)	
<i>Currently pregnant or having a pregnant partner?, n (%)</i>			0
No	20,114 (97.7)	11,364 (98.6)	
Yes	480 (2.3)	162 (1.4)	
<i>Previously pregnant or having a pregnant partner?, n (%)</i>			0
No	18,125 (88.0)	10,552 (91.5)	
Yes	2,469 (12.0)	974 (8.5)	

Among the 32,120 participants, 30,604 answered questions on fertility intentions. Among women, 81.1% either had or wanted to have children, 7.8% did not want children, and 11.1% were unsure. Among men, 79.9% either had or wanted to have children, 8.7% did not and 11.3% were unsure (Figure 2 A). These results did not differ according to single-year age groups.

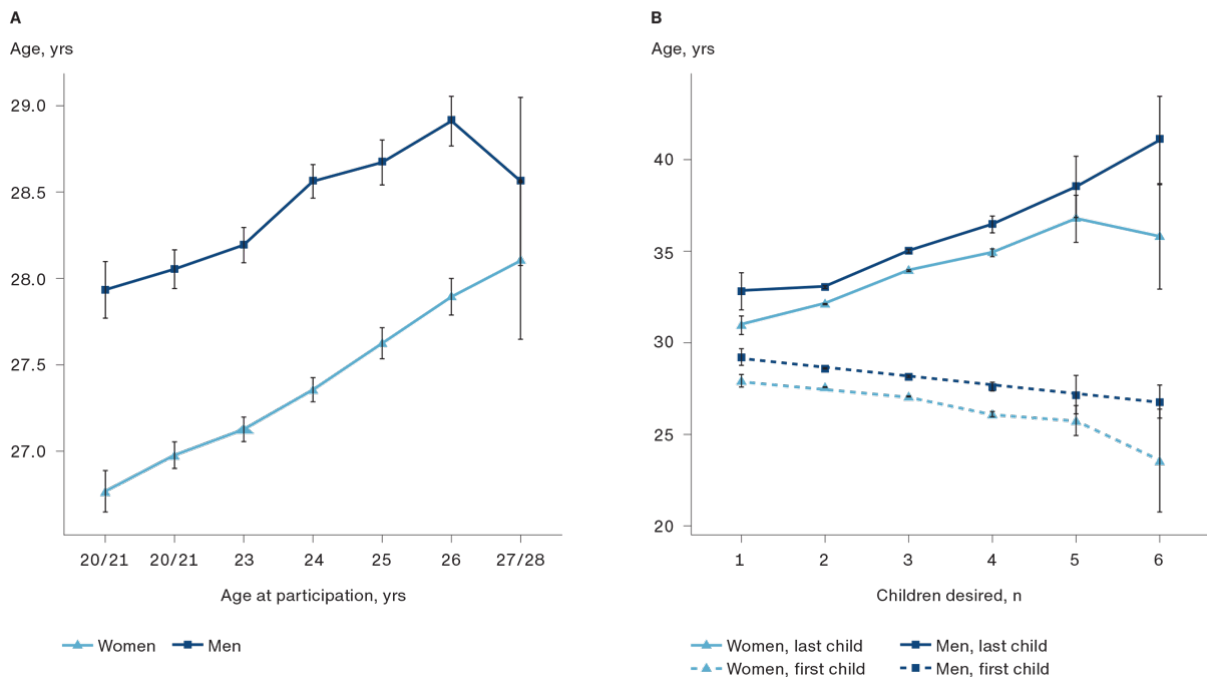
FIGURE 2 Fertility intentions in the second generation born within the Danish National Birth Cohort, Denmark, 2024-2025. **A.** Distribution of fertility intentions (wanting to have children: yes, no, don't know) as percentages, according to sex. **B.** Distribution of fertility intentions (the total number of biological children, don't know) as percentages among participants who indicated that they wanted to have children, according to sex.



Among those who wanted to have children, both women and men preferred 2-3 children (88.1% and 87.1%), and only 1.5% (women) and 1.4% (men) preferred only one child (Figure 2 B). Among all respondents (except those unsure about their fertility intentions), the average number of children desired was 2.2 (SD: 0.9) for both women and men. The average number of children wished for was 2.46 (SD: 0.6) for women who wanted children and 2.43 (SD: 0.7) for men who wanted children.

Mean preferred age for the first child was 27.3 years (SD: 2.2 years) in women and 28.4 years (SD: 2.2 years) in men. The mean preferred age for the last child was 32.9 years (SD: 3.1 years) in women and 34.0 years (SD: 3.7 years) in men. There was a tendency towards older respondents preferring their first child at an older age than younger respondents (Figure 3 A). The same tendency was observed for the preferred age of having the last child. The more children the respondent wished for, the earlier and later the preferred ages for the first and last child (Figure 3 B).

FIGURE 3 Desired age at birth in the second generation born within the Danish National Birth Cohort, Denmark, 2024-2025. **A.** Mean desired age with 95% CI at first child, according to age when completing the questionnaire, stratified by sex. **B.** Mean desired age with 95% CI at first and last child, according to the total number of children desired, stratified by sex.



Discussion

Key results

This study showed that fertility intentions among young Danish adults remain highly positive. Most of the participants expected to become parents in the future, most commonly wishing for two to three children. Around 20% of the respondents expressed uncertainty or did not want children at all. The proportion of young adults not wanting children was similar to that found in other recent Danish research (8-9%) [12, 13]. The preferred age at first birth was slightly higher in men than in women (27-28 years, respectively), indicating that young people still imagine a relatively early transition to parenthood. Preferences were highly consistent across sex and age groups, though we observed a tendency for younger respondents to prefer a younger age at first birth and older respondents to prefer an older age at first birth.

Strengths and limitations

Strengths of this descriptive study include the large number of participants reporting their current fertility intentions and the use of a large, nationwide cohort, providing knowledge from a population-based sample of both women and men. The relatively low participation rate (36%) constitutes a limitation if participants differ in fertility intentions from non-participants, which we cannot rule out. Moreover, we provided current fertility intentions as a snapshot, and self-reported intentions may evolve over time as the young adults get older. The questions used in BIOSFER were inspired by the Swedish Fertility Awareness Questionnaire, allowing for improved cross-country comparisons. Annual and biannual follow-up questionnaires are currently being sent out.

Interpretation

The intentions observed in this study may reflect an emerging gap between realised and desired fertility, as Danish population data reveal a markedly different fertility trajectory. Although only 7.8% of women and 8.7% of men did not want children in our study, an even higher proportion of women (12-14%) and men (around 20%) remain childless at age 50 years [14-16]. Excluding those being unsure about their fertility intentions, women and men wished for 2.2 children. These numbers are also markedly different from the current-period fertility rate of 1.5 children born per woman and higher than the predicted completed cohort fertility for cohorts closest to the DNBC birth cohorts, currently estimated at around 1.6 children (1.5-1.8 children) born per woman. Moreover, we observed a mean preferred age at first birth in women (27.3 years) and men (28.4 years); noticeably younger than the actual age at first birth in both women (30.4 years) and men (31.9 years) at the population level [1, 17]. This divergence suggests that the optimism expressed by young adults does not always reflect the realities of later life. The persistent gap between intended and achieved fertility highlights the importance of understanding how early expectations interact with the constraints that emerge over the life course.

Our results align closely with previous studies on fertility intentions in Denmark. Vassard *et al.* and Sørensen *et al.* reported that most young adults wanted to have children (85% and 86%, respectively) and typically wished for two to three children [7, 8]. Whereas the young adults in our study envisioned their age at first birth in their mid-to-late twenties, most participants in previous studies anticipated completing childbearing relatively late, sometimes beyond age 35 years [7, 9]. However, the participants were also slightly older in the previous studies, which might explain this discrepancy [8, 9]. Despite these differences, all studies reveal a shared optimism about future fertility, suggesting that unmet fertility, rather than a lack of desire, likely contributes to the rising childlessness observed in Denmark.

When comparing the results for Denmark with those for other Nordic countries, our results align closely with evidence from Finland, Norway and Sweden, where young adults wish for two or more children and an early transition to family life [18]. Despite these broadly shared intentions, all Nordic countries have seen a steady postponement of first births and a rise in childlessness, most noticeably among men [19]. This suggests that while the Nordic welfare model supports families through parental leave and subsidised childcare, these measures do not counteract the increasing social gradient in fertility or the challenges posed by age-related declines in fecundity [14]. The Danish findings, therefore, fit into a wider Nordic pattern where fertility realisation is increasingly constrained.

In countries with markedly different welfare structures, the contrast is even more pronounced. Across Southern Europe and many East Asian countries, fertility rates are even lower, underscoring the strong influence of national policies, gender equality, labour market structures and broader societal norms on realised fertility [20].

Conclusions

We found that most young adults wanted to become parents in their mid-to-late twenties, most commonly wishing for two to three children. Knowledge about fertility intentions plays a central role in clinical counselling and in broader public health strategies. Our findings may therefore add important nuance to the ongoing debate about the declining fertility rate in Denmark and may serve as an evidence base for designing targeted awareness campaigns and interventions to support informed decision-making among young adults aspiring to become parents. Importantly, the results from our study highlight that the gap between desired and realised fertility in Denmark is large, suggesting substantial potential for policy interventions that address life-course constraints to impact the declining fertility rate.

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Supplementary: https://content.ugeskriftet.dk/sites/default/files/2026-05/a02260118_supplementary.pdf

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