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Declining Sex Ratio at birth in India: Reflection of Economic and Socio-Cultural Preferences

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Abstract

Gender equality is a core development objective in its own right and also smart economics. Moreover, greater gender equality can enhance productivity, improve development outcomes for the next generation, and make institutions more representative. At present, declining sex ratio at birth is a silent emergency. But the crisis is real, and its persistence has profound and frightening implications for society and the future of humankind.Sex Ratio at Birth (SRB) refers to male births per female births. The lowest-ever sex ratio at birth overshadowed decrease in the child sex ratio of 914 in 2011-as it reflects a continued preference for a male child.As per the Census of 2011, the overall sex ratio had gone up by seven points to touch 940, against 933 in Census 2001, while the child sex ratio plummeted to 914 from 927. Sex Ratio is the number of women against 1,000 men, while Child Sex Ratio (CSR) is the number of girls against 1,000 boys in the age group of 0-6.The overall sex ratio had increased, but still there is concern at the decline in the child sex ratio, because of decline in sex ratio at birth. The declining child sex ratio that came as a shocker in the latest (2011) census figures shows 914 girls, and this is the lowest ever since Independence, slipping from 927 in 2001. The present paper examines

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decline in sex ratio at birththereby the declining pattern of child sex ratio in India and its major statesbased on census data along with other sources. The paper alsodiscusses causes andsevere consequences along with implications to overcome the issue in India.

Keywords

Sex Ratio at birth, Child sex ratio, Female foeticide, Son preference, Economic and Socio-Cultural motives.

Introduction

In anthropology and demography, the human sex ratio is the ratio of males to females in a population. In uninterrupted conditions, the sex ratio in humans is approximately 1:1. But, due to high rate of sex selective abortions, female fetal mortality has been higher (Orzack, S. H et al; 2015), thereby the sex ratio at birth worldwide is commonly thought to be 107 boys to 100 girls (The Central Intelligence Agency of the United States, 2013). In recent decades, child sex ratio has been rapidly declined and causes to imbalancedchild sex ratio in many countries. The problem of declining child sex ratio in Indiais better understood, if one considers the fact that the child sex ratio is primarily influenced by sex ratio at birth and mortality in the early childhood. The natural sex ratio at birth usually has higher male births. It ranges between 943 and 954. But the advantage of higher sex ratio at birth (SRB) is neutralized due to higher male infant mortality in the normal population. In a study around 2002, the natural sex ratio at birth was estimated to be close to 1.06 males per female (Grech. V et al, 2002).

Imbalancein sexratio at birth is present in different population across the worlds.As per the United Nations Population Division's World Population Prospects- 2015, the five year averages data on Sex ratios at birth (male births per female births) for various nations are as fallow: China-1.15, Armenia-1.13,Azerbaijan-1.13, India-1.11, Paskistan-1.09, Samoa-1.08, Albenia-1.08, Republic of Korea-1.07, Nepal-1.06, Noryey-1.06, Canada-1.06, Germaney-1.06, Bagladesh-1.05, U.S.A-1.05, France-1.05, Indonesia-1.05,Srilanka-1.04, Sudan-1.04, Bhutan-1.04, Kenya-1.03, Mongolia-1.03, Congo, Rep.-1.03, Guinea-1.02, Zimbibwe-1.02, Rwanda-1.02(Health Nutrition and Population Statistics - World Bank,2017). It clearly shows male child

preference and reflects the economic and socio-cultural aspects affecting sex ratio at birth among the nations and thereby causing to affect child sex ratio in particular and sex ratio in general.

In general, the natural sex ratio is 105 to 100. However, gender selection for males in patriarchal societies has altered birth rates through the abortion of girls, creating an unnatural imbalance in sexes. China and India have had sex ratios at birth as high as 120 to 100. Though the worldwide sex ratio only seems slightly out of balance, some countries' adult sex ratios are as high as 274 to 100 between the ages of 16 to 24. In economically developed countries, as well as developing countries, the scientific studies have found that the human sex ratio at birth has historically varied between 0.94 and 1.15 for natural reasons. In India, prior to 2001, the child sex ratio was close to sex ratio at birth but due to rapid decline, this has fallen even below the natural SRB in Census 2001. This reflects a grim picture of the status of the girl child in the country and majority of the states. The magnitude of the decline can be seen by the fact that 31 States / UTs have registered a decline in Child Sex Ratio in 2001.Alarming trends are discerned in some of the major states like Punjab, Haryana, Himachal Pradesh, Gujarat, and Delhi. Only Kerala, Pondicherry and Lakshadweep have shown an increasing trend in between 1991-2001, here sex ratio is favourable for females.

Objective

The paper aims at studying the declining in sex ratio at birth and child sex ratio in India, its causes as well as consequences and suggests measures to improve sex ratioat birth thereby rise in child sex ratio in particular as well as overall sex ratio in general.

Method and Material

The paper is based on secondary data collected from census of Indiaanda number of other available sources yield more recent information on (Sex Ratio at Birth) SRB. These include various editions of the Sample Registration System (SRS), thefourth edition of the National Family Health Survey (NFHS) and information from the Civil Registration System (CRS).

Discussion

Low Sex Ratio at birth means diminishing child and overall sex ratio of the population over a period of time. The imbalance at this level affects the demographic trend of the population as a whole and is very difficult to be removed for a long time. It may be inference that having balanced males and females population is an ideal condition. Declining sex ratio at birth indicates the influence of economic and socio-cultural practices in a region/country.

Table 1: Sex Ratio at Birth (Females per 1,000 Males) for India and Major States Based on Census, SRS, CRS and NFHS

Note: Both SRS and CRS provide SRB whereas NFHS provides SRB for children born in the last five years. The census data refers to at ages 0 and 1 combined.Sources: (1) Office of the Registrar General (2012, 2014, 2016b). (2) Kishor and Gupta (2009); IIPS (2007, 2016).

India and Major States	Census[1]		National Family Health Survey[2]		Sample Registration System[3]			Civil Registration System[4]				Level of Registration of Births[4] (%)			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	2001	2011	2005-06	2015–16	2010-12	2011-13	2012-14	2011	2012	2013	2014	2011	2012	2013	2014
India	905	899	920	n.a	908	909	906	909	908	898	887	83.6	84.4	85.6	88.8
Andhra Pradesh	951	924	876	914	914	916	919	983	985	954	955	79.8	74.8	98.5	100
Assam	948	930	1033	929	922	920	918	920	872	909	902	85.8	87.6	97.7	100
Bihar	917	892	893	934	909	911	907	n.a	n.a	924	868	59.8	74.7	57.4	64.2
Chhattisgarh	928	948	972	977	979	970	973	915	895	925	934	55.1	74.2	87.8	100
Delhi	852	869	848	n.a	884	887	876	893	886	895	896	100	100	100	100
Gujarat	834	868	906	907	909	911	907	901	902	901	886	100	100	100	95
Haryana	786	824	762	836	857	864	866	833	832	840	843	100	100	100	100
Himachal Pradesh	845	948	901	n.a	939	943	938	918	916	906	896	100	100	100	93.1
Jammu and Kashmir	951	774	912	n.a	895	902	899	913	n.a	923	914	69.9	69.8	71.8	75.5
Jharkhand	907	903	1,102	n.a	918	913	910	n.a	847	885	886	60.7	61.9	77.7	82
Karnataka	936	922	922	910	950	958	950	983	971	943	926	98.9	100	96	97.8
Kerala	969	977	902	n.a	966	966	974	939	955	942	948	100	100	100	100
Madhya Pradesh	903	908	960	927	921	920	927	897	912	904	908	86.5	87.2	84.1	82.6
Maharashtra	877	862	867	924	896	902	896	861	894	901	911	100	100	100	100
Odisha	928	910	963	933	948	956	953	902	896	886	880	95.6	96.4	93.9	98.5
Punjab	787	843	734	860	863	867	870	852	844	876	880	100	100	100	100
Rajasthan	864	899	847	887	893	893	893	911	861	859	799	96.7	98	98.4	98.2
Tamil Nadu	935	934	896	954	928	927	921	905	904	853	834	100	100	100	100
Uttar Pradesh	901	890	949	n.a	874	878	869	n.a	930	883	881	64.9	57.5	68.6	68.3
West Bengal	975	937	976	960	944	943	952	924	926	913	897	100	100	92.8	92.5

The trends in sex ratio at birth of population in India furnished in table-1shows that it has been declining in recent decades.Analysis of census data showed that the changes in the 0–1 year sex ratio (Sex Ratio at Birth-SRB) declined over the 10-year period from 905 (female births per 1,000 male births) to 899 and that there has been no let-up in daughter deficit. A striking aspect of the analysis was that in the north-western states, which have a long history of high levels of daughter deficit, there was an increase in the SRB between 2001 and 2011; while southern and eastern states experienced declines between the two censuses. Though the eastern is traditionally a region of thecountry with limited son preference, but the SRB declined between 2001 and 2011. An examination of state-level SRB based on SRS data over the years 2010–12 and 2012–14 shows that an increase in SRBin the north-western states (Gujarat, Haryana, Punjab and Rajasthan) and a decline in the ratio in some of the eastern states (Assam and Bihar). Analysis of SRB based on NFHS data mirror some of the patterns found in the census. The NFHS data show an increase in the SRB in north-western states (Haryana, Punjab and Rajasthan) and a decline in the SRB in the eastern states (Assam, Oddisa and West Bengal).

In recent decades, the child sex ratio in India has been declining drastically as result of decrease in sex ratio at birth. The data collated by the Office of the Registrar General of India from the Civil Registration System (CRS) reveals that in 2016 Andhra Pradesh and Rajasthan

had the worst sex ratio at birth (SRB) of 806. Tamil Nadu, which had sex ratio of 935 in 2007, came down to 840 compared to the all India figure of 877. Karnataka has fallen from 1,004 to 896 and Telangana stands at 881.The data with regard to Tamil Nadu is more alarming because it has been lower than the all India figure. In Karnataka, as per the report, ever since 2011 it achieved 901 birth registrations and has a Sex Ratio at Birth of 983 which has declined by 108 marks in comparison with the survey conducted in 2007 when it was 1,004.Only Kerala could manage to have the highest SRB and in 2016 it reached 954.The inadequate sex ratios have generally been associated with the states like Haryana and Punjab but the present data shows that the scenario is worse in south India, though socio-economically progressive in recent decades.

According to civil registration system released by the office of the registrar general of India Child sex ratio at birth continues to worsen in India and falling over a period. The Child sex ratio at birth recorded as 909 in 2011, 988 in 2013 and 887 in 2014. While according to sample registration survey, the child sex ratio at birth is 914 in 2011, 927 in 2001.The data of sample registration survey are considered more accurate than the data of civil registration because the coverage of sample registration is wider. According to civil registration survey, Lakshadweep with 1043, Andaman and Nicobar-1031 and Arunachal Pradesh-993 are some of the best performing states, while Manipur 684, Rajasthan 799 and Tamil Nadu 834 fare the worst. According to the sample registration survey the spatial pattern of child sex ratio according to 2011 census with best performing states being Arunachal Pradesh- 972, Mizoram -970 and Chhattisgarh- 969 and worst performing states: Haryana- 834, Punjab- 846, Jammu and Kashmir-862. Despite legal provisions, incentive-based schemes, and media messages the child sex ratio is declining,which clearly reveals economic and socio-cultural prejudices of people.Therefore, across the country, bridging class, caste divides; geography sex ratio is on a decline.

In this context, The National Human Rights Commission (NHRC)of India has taken a serious note of media reports that have raised the issue of sex ratio at birth causes to abysmal sex ratio across the country, especially in the southern states.Expressing concern over the reported decline of the sex ratio at birth across the country, the NHRC has sought a report from the Women and Child Development Ministry and Chief Secretaries of all the states and UTs on the status of implementation of the various welfare schemes on the issue.Further, the National Human Rights Commission (NHRC) has also invited comments from the state governments and UT's along with their suggestions to improve the sex ratio at birth besides sharing of best

practices for proper reporting and registration of births.The NHRC has further observed that it is aware that the central as well as state governments have announced and implemented various schemes to create awareness among the general public to save the girl child and improve the gender equation but the data reflected in the instant news report gives a different picture."If the data reflected from report is correct, it seriously affects gender equality besides the fact that the Constitution of India (Article-15) prohibits discrimination in any form, including sex, which ultimately violates human rights of the weaker sections of the society i.e. girl and women and, therefore, there is a need for immediate attention and action by the Union as well as State governments,". According to the official report, most of the states have achieved near 100 per cent registration of births, hence, it cannot be said that all the cases of birth of girl children are not being reported.

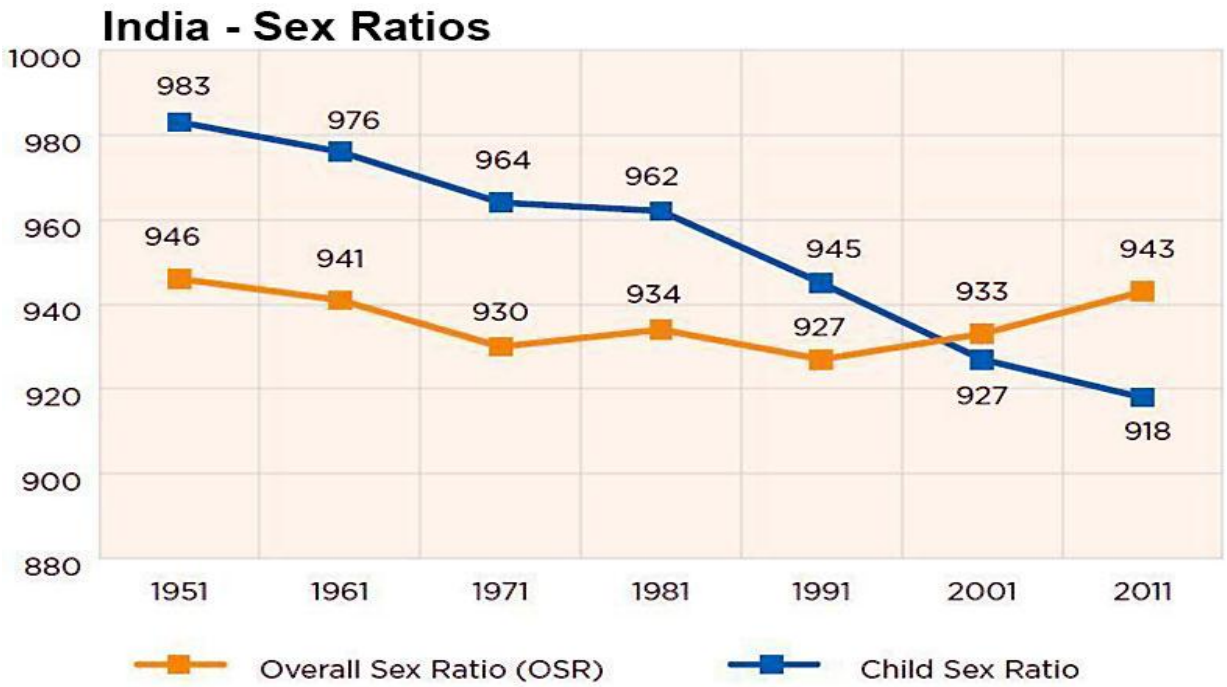
Child sex ratio

In recent decades, declining in sex ratio at birth has been major cause for decrease in child sex ratio in India.Child sex ratio is defined as number of female child per thousand male child in the age group of 0-6 years of Population and is an indicator of relative excess or deficit of men or women in a given population (Sex differential) at that point of time (in this case for the period of Census. Sex composition by age groupsis vital for studying the demographic trends of young population, its futurepatterns and particularly,the status of the girl childin a country.

Table-2: Trends in Overall sex ratio and Child Sex Ratio in India

Census Year	1951	1961	1971	1981	1991	2001	2011
Overall Sex Ratio	946	941	930	934	927	933	940
Child Sex ratio	983	960	964	962	945	933	914

The Census 2011 figures has shown that despite several counter measures by Government, worrying trend of continuous decline in Child sex ratio (0-6 year) since Census 1961 has not stopped and this census also registered decline from 927 females per thousand males in 2001 to 919 females per thousand males in 2011 (945 in 1991 and 962 in 1981).



From: UN Women. Sex ratios and gender biased sex selection: history, debates and future directions. 2014.

Figure-1: Overall sex ratio and Child Sex Ratio of India in 1951-2011.

The deteriorating ratio from 983 girls to 1,000 boys in 1951 to 927 girls in 2001 and to 918 girls in 2011 and thereby decline in overall sex ratio from 1946 females per 1000 males in 1951 to 943 in 2001 and 943 in 2011 reveals that the economic and social progress in the country has had least bearing on the status of daughters and women in India six decades (1951-2001).

Child sex ratio by residence

Though the national average for child sex ratio in the case of rural population is higher at 934 if compared to 906 of urban population, the position is not encouraging as this is also below the natural sex ratio at birth. Moreover, this has registered a decline if compared to 1991 when it was 948. Only Dadra & Nagar Haveli (1003), Lakshadweep (999), Chhattisgarh (982), Meghalaya (973) and Jharkhand (973) have satisfactory child sex ratio. Twenty-three States/UTs have reported child sex ratio above the national average and remaining twelve falls below this mark in their rural areas. Delhi, Chandigarh, Haryana and Punjab are placed at the bottom with child sex ratio raging between 850-799. Aggregated at the national level, the child sex ratio in urban areas is very low at 906, which is a sharp decline from 935 in 1991. Eleven States / UTs have child sex ratio below the national average in 2001, indicative of sex selective births due to female feticides.

Sex ratio by states/ UTs

The trends in child sex ratio in the states/UTs reveal the magnitude of girl child status.

Table-3: Child Sex Ratio (CSR) in India State/UTs in 2001-2011.

S.No	State/UTs	CSR (0-6)		S.No	State/UTs	CSR (0-6)		S.No	State/UTs	CSR (0-6)	
		2001	2011			2001	2011			2001	2011
1	**India**	**927**	**914**	13	Arunachal Pradesh	964	972	24	Gujarat	883	890
2	Jammu & Kashmir	941	862	14	Nagaland	964	943	25	Daman & Diu	926	904
3	Himachal Pradesh	896	909	15	Manipur	957	936	26	Dadra & Nagar Haveli	979	926
4	Punjab	798	846	16	Mizoram	964	970	27	Maharashtra	913	894
5	Chandigarh	845	880	17	Tripura	966	957	28	Andhra Pradesh	961	939
6	Uttarakhand	908	890	18	Meghalaya	973	970	29	Karnataka	946	948
7	Haryana	819	834	19	Assam	965	962	30	Goa	938	942
8	Nct of Delhi	868	871	20	West Bengal	960	956	31	Lakshadweep	959	911
9	Rajasthan	909	888	21	Jharkhand	965	948	32	Kerala	960	964
10	Uttar Pradesh	916	902	22	Odisha	953	941	33	Tamil Nadu	942	943
11	Bihar	942	935	23	Chhattisgarh	975	969	34	Puducherry	967	967
12	Sikkim	963	957	24	Madhya Pradesh	932	918	35	A & N Islands	957	968

Table-3 depicts that the northeast states such as Manipur and Nagaland and in the states of Jammu and Kashmir, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtraand Andhra Pradeshhave shown a sharp decline in the child sex ratio between 2001 and 2011. In contrast, the ratio in Punjab improved from 798 to 846 and in Haryana from 819 to 834 in the same period. The report has also mentioned that the dwindling number of girls is fuelling increase in crimes such as kidnapping and trafficking.In India decline in Child sex ratio can be due to:Rampant Sex select abortions, Small family norm, Sex ratio at birth difference in child mortality rate, family migration, and the undercounting of girls at timespopulation enumeration.

Causes for skewed sex ratio at birth

- Patriarchal societies in most parts of India have translated their prejudice and bigotry into a compulsive preference for boys and discrimination against the girl child.Patriarchy has led to neglect of nutrition, health care, education, and employment for girls, which clearly shows the economic and socio-cultural preferences of people.
- No check on female foeticide: medical technology (like amniocentesis and ultrasonography), employed in the prenatal period to diagnose genetic abnormalities, are being misused in India for sex selective abortions leading to high rate of female feticide. Collusion between people, the medical fraternity and the administration has resulted in the worsening of the child sex ratio and failure of Pre-conception and Pre-natal Diagnostic Techniques (PC&PNDT) Act in 1996to make a difference.
- Small family norm: Decline in family size increases preference for male childby couple.

- Dowry and education system: Exuberant dowry that is paid by the bride family and expensive education system is an economic burden for the family and hence preference for male child.
- Non Preference of girl child: Traditional Indian societal preference for Son - belief that it is only the son who can perform the last rites, that lineage and inheritance runs through the male line, sons will look after parents in old age, men are the bread winners etc, while girl children are treated as economic burdens.Marked improvements in the economy and literacy rates do not seem to have had any impact on this index. The availability of new technology and its easy access for the urban, wealthy and the educated have worsened the trend and harmed the status of women in Indian society.
- Everyday casual and hurtful misogyny- gendered language, sexist innuendo, stereotyping and jokes, small institutional inequities, sexualisation of society encouragedand also providing security to girls from threats upto marriage is a serious issue in now-a-days. All these cause clearly reflection the Economic and Socio-Cultural preferences led to male children biased.

Consequences of imbalanced sex ratio at birth

Declining sex ratio at birth is a silent emergency. But the crisis is real, and its persistence has profound and frightening implications for society and the future of humankind. Thus, the implications are not only gender injustice and inequality,but also social violence, worst human development and democracy. It leads to social unrest and severe immoral consequences such as:

Stopping of family lineage: Since it would become difficult to find bride for marriage, most men would remain unmarried. This is known as the "marriage squeeze."The poorest males will be disproportionately affected by this marriage squeeze. This may cause destabilization and may translate into class-based tensions (Guilmoto, C. Z, 2008).

Crimes against women will increase: Crimes against women are higher in societies with adverse sex ratio at birth than in society with good sex ratio. Ex- Punjab and Haryana with skewed child sex ratio have more crimes against women than seen in Kerala or Tamil Nadu that have good sex ratios. The ugly social practice of polygamy has comeback in certain areas as well as forcible marriages of widows and purchasing of brides from poor areas.

Discrimination and neglect of girl: It child can lead to low self-esteem, lifelong deprivation and exclusion from the social mainstream. Further, violence and trafficking of poor girl children and forced polyandry are seen in some regions with markedly skewed ratios.

Decline in fertility rate: Skewed sex ratio at birth implies the number of females who enter the reproductive age would be less and in the long run there would be less population growth rate. If the woman sex ratio of eligible marriage age is significantly smaller than the men, there will be a resulting decline in fertility (The Economist, 2015).

Low Productivity: The impact of a skewed sex ratio at birth with more male children than females is already being felt in some parts of India and China (The Economist, 2015) and is likely to continue to tighten the skewed ratio between genders of children. The economic consequences are grave for this means that a huge proportion of the productive population is missing and also the lack of women impairs the ability of men to work.

Men at unrest: Larger amount of unmarried men can cause havoc in the country. Relationships and marriage potentially keep these men out of trouble; therefore with the problem of not having enough women for men to marry can cause men to make poor decisions. Typically the men who are not able to marry are those of middle to low socio-economic classes who do not have as much education, thus leading to closing themselves off to society and acting in violence behaviors (Hesketh, T et al, 2006).

Measuresfor improvement

To halt the declining child sex ratio and to improve the rate of girl child birth as well as survive, government has taken following steps such as: Every year, National Girl Child Day-(NGCD) is celebrated in India on January 24th with an aim to raise awareness about Child Sex Ratio (CSR) levels and promote the empowerment of girls. In this context, BetiBachao and BetiPadhao with SukanyaSamriddhiYojana is a positive initiative to improve girl child delivery, education and her marriage through financial incentives, thus helping in the empowerment of girl and reducing the economic burden that families face at the time of marriage. But, a stronger message would be disseminatedin order to let the girl child be born and let her live up to her full potential. Two-way exchanges of information via discussions serve as examples that may help break social attitudinal barriers. Further, newly weeded couple would be educated on the severe evil consequences of decline in sex ratio at birth and the role female in the national development.

Conclusion

The government and the civil society must go beyond policy-making and must quickly identify specific behaviours, cultural attributes, practices, media representations, mindsets and notions that propagate discrimination against daughters and consequently help sex-determination testing flourish despite its illegality. All these actions can help an increase in sex ration at birth by superseding the couples Economic and Socio-Cultural preferencestowards male child biased.

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