

The Legitimacy of a 'Bridal' Birth Rate—A Further Reply to Carmichael.

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Dr Carmichael has devoted considerable professional attention to a very modest paper, 'Ex-nuptially Conceived Births: A Note on Measurement', that I wrote for ANZJS some two years ago.

His previous objections centred around two points, the illegitimacy of a 'bridal' birth rate (births within seven months of marriage per 1,000 unmarried women) and possible sources of bias in an ex-nuptial birth rate. To these he has now added a third. I have unfairly attempted to shift the emphasis of the debate from a discussion about measurement to a discussion about the purpose of doing social research.

To take the last point first: my main aim in writing the paper, which I stated at the time and re-emphasised subsequently, was to help clarify a rather confused public impression about 'rises' in ex-nuptial fertility, particularly 'rises' in teenage ex-nuptial fertility. I wished to point out firstly that ex-nuptial fertility had in fact declined in the early 1970s and secondly that, while rates for girls in their teens had always been lower than those for older women, these too had declined in the 1970s.

I included bridal' births in my discussion because these births are almost invariably conceived ex-nuptially. Again, a similar pattern of decline could be seen for the 1970s, and the teenage rate, though slightly higher in 1971 than the teenage ex-nuptial rate, also fell dramatically. If the two components of ex-nuptially conceived births were combined the overall picture showed a rapid decline from 1971 to 1976 in all age-group categories. It also showed that teenage rates from 1961 to 1976 were invariably lower than those of women aged between 20 and 34 and rather similar to those of women aged 35 to 39.

It seemed to me then, and it seems to me now, that this was useful information both for people who were interested in interpreting trends and for people who were concerned with protecting the rights of unmarried girls and women who experience ex-nuptial pregnancies.

Table one, reproduced from my original paper, illustrates these trends with the addition of material for 1981.

Table 1. Ex-nuptial and bridal confinements as a rate per 1,000 unmarried women by age

	AGE					
	15-19	20-24	25-29	30-34	35-39	40-44
	Ex-nuptial					
1961	9.4	26.5	48.6	48.3	29.1	8.5
1966	13.7	28.1	48.1	48.3	30.0	9.7
1971	19.8	43.4	61.7	54.8	31.6	9.3
1976	15.5	31.4	45.2	37.0	20.5	4.6
1981	16.9	31.9	41.1	30.4	15.2	3.9
	Bridal					
1961	18.4	37.5	18.7	9.8	4.5	1.3
1966	20.9	37.8	17.9	8.6	3.9	0.9
1971	23.4	41.1	18.7	9.6	4.0	1.0
1976	9.2	15.2	12.3	8.6	3.4	0.7
1981	5.7	13.4	13.9	10.1	4.1	0.6
	Ex-nuptial and Bridal					
1961	27.8	64.0	67.3	58.1	33.6	9.8
1966	34.6	65.9	66.0	56.9	33.9	10.6
1971	43.2	84.5	80.4	64.4	35.6	10.3
1976	24.7	46.6	57.5	45.6	23.9	5.3
1981	22.6	45.3	55.0	40.5	19.3	4.5

Source: The 1961 to 1976 figures are reproduced from Table 3 in Betts (1981). Figures for 1981 are derived from *Births Australia 1981* (ABS, Catalogue No. 3301.0) and Census data.

Note: This table draws on data describing confinements resulting in *live* births. Because of multiple births the number of confinements is slightly lower than the number of births.

The term 'unmarried' includes widowed and divorced women as well as those who have never married.

From it we can see that fertility resulting from ex-nuptial conceptions has, in 1981, remained at or around the low level of 1976. Indeed, when ex-nuptial and bridal rates are combined, they are found to be slightly lower in 1981 at all age levels than they were in 1976 and teenage ex-nuptially conceived fertility continues to be lower than that of women aged 20 to 34.

I regret the fact that the inclusion of the phrase 'a note on measurement' in the title of my paper created the impression that I wished to poach on the specialist concerns of professional demographers. I can only plead that the problem of a public sense of alarm about 'rising teenage ex-nuptial birth rates' was a product of misleading measures and could only be addressed by the presentation of data based on more valid measures.

Fortunately the measures I used, age-specific rates based on 'at risk' populations were, as Table 1 illustrates, quite straightforward. They did not require the specialist skills of the demographer. Rather they relied on arithmetic and common sense. That is, in the first place it seemed sensible to follow the established practice of expressing ex-nuptial births as a rate per 1,000 unmarried women in specific age group categories.

Secondly, I wished to find a way of expressing 'bridal' births so that I could control for changes in the size of the population 'at risk' and, at the same time, compare them with ex-nuptial births. Existing measures, like percentage of brides pregnant at marriage, were obviously inadequate. But, as girls and women who experience 'bridal' births are almost invariably unmarried when they conceive, it seemed equally sensible to express 'bridal' births as a rate per thousand unmarried women.

Perhaps the fact that I had not encountered a 'bridal' birth rate elsewhere should have given me pause. Carmichael writes that 'were it legitimate it is hard to imagine that it would not have entered the literature long ago'. Had I been writing with the intention of establishing a new and original measure I might have felt some anxiety: could this be legitimate if it had not been done before? But it was not my intention to be an innovator. I wished, rather, to explain a fairly simple matter in simple terms.

In fact I would be surprised to learn that a 'bridal' birth rate as I derived it was original, but whether it is or not is immaterial. The important question is, is it a useful and valid measure?

What are the objections? There is, it appears, only one. Carmichael tells us that it is this: it is 'logical nonsense' to express 'bridal' births as a rate per 1,000 unmarried women because such births occur to married women. Are we to conclude from this that it is logical to express them as a rate per 1,000 married women?

It is indeed a basic principle in the construction of a demographic rate that the denominator should consist of people who are at risk of experiencing the events described in the numerator. Barring extreme prematurity or a complex history of divorce and immediate remarriage, women who are married at the time of conception are not 'at risk' of experiencing 'bridal' births. Clearly it is not sensible to use the population of married women as the denominator. People who are 'at risk' of eventually experiencing 'bridal' births are women who are unmarried at the time of conception.

Any logic which says otherwise belongs to the other side of the looking glass and Carmichael acknowledges this. His 'ex-nuptial conception resulting in nuptial confinement' rate is based on exactly the

same 'at risk' population and describes exactly the same birth experiences as the 'bridal' rate I used. The only difference between his rate and mine lies in a complex statistical procedure whereby we assume that gestation lasts 38 weeks and count back from the time of birth to a presumed time of conception.

It is this statistical ritual that transforms the 'logical nonsense' of a 'bridal' rate into a demographically acceptable measure. Why? Because 'the one instant at which we can guarantee that the mother was not married to the child's father is the instant of conception'. But if there are uncertainties about this at the time of the birth, it is hard to see how they can be resolved by the procedure of counting back for 38 weeks.

We cannot *guarantee* that the information people provide about the parentage of their children or about their own marital status will be truthful. Counting and manipulating formulae in the presence of unreliable data may soothe our anxieties, but it will not eliminate error. If we want to reduce errors we have to do something else: we have to find better ways of persuading people that we can be trusted with the truth.

As it is clear that there are no logical objections to a 'bridal' birth rate, a discussion of the kind of empirical errors that might affect it could be useful at this point. For example, the possibility that married women may conceive children born within seven months of marriage is small. It is unlikely to affect the reliability of a rate based on an 'at risk' population of unmarried women. But it is possible that face saving lies about the date of marriage could affect the number of births recorded in the numerator and bias the rate downwards.

These are not, however, the issues that Carmichael has raised: rather, in the second part of this paper, he has returned to the problems that have already engaged us in some debate concerning the ex-nuptial birth rate. Essentially these revolve around two difficulties: married women may bear children fathered by men other than their legal husbands, and unmarried women living in de facto relationships may declare themselves to be 'married' when they complete their census forms.

Yes, some married women may have extra-marital relationships and some may bear ex-nuptial children (and some may register them as such). Indeed any fecund woman, married or not, is *potentially* 'at risk' of an ex-nuptial birth. We have a choice of either including *all* women in the denominator or of confining it to unmarried women. The latter course has the advantage of concentrating our attention on those who are socially rather more 'at risk' of ex-nuptially conceived births and of eliminating those who are also 'at risk' of nuptially conceived births.

Adding into the denominator only some married women, because they are thought to be more 'at risk' of ex-nuptial fertility than others, would give us the worst of both worlds. It would, like the existing rate, deny the logical possibility that all women are potentially 'at risk' and it would introduce a host of reliability problems.

As far as the second difficulty is concerned, yes, it is also possible that some unmarried women may tell the census they are 'married'. Unfortunately Carmichael has not provided us with any new information about the extent to which either of these difficulties in fact exist and the extent to which they may introduce bias into an ex-nuptial birth rate.

Rather, starting from the assumption that the phenomena are widespread he has some intuitive ideas about the way in which they 'almost certainly' introduce a 'net upward bias of not inconsequential magnitude'. That is, he has a 'hunch' that married women who bear children conceived in adulterous unions will probably tell the truth about their child's origins, despite some considerable social pressure to tell lies. On the other hand, he believes that unmarried women in de facto relationships will probably lie about the status of their relationships and describe themselves as 'married'. This is in spite of the fact that the Australian census does not encourage the practice and that, in the relative privacy in which census forms are completed, there is no particular reason for them to do so.

If he is right the two tendencies would certainly inflate an ex-nuptial birth rate. If it should also happen, as he asserts, that this differential tendency to tell the truth is one situation and to lie in the other increases with age, rates in the older age group categories would be inflated vis-à-vis those in younger age group categories.

Carmichael does provide data which show that in New Zealand a higher proportion of ex-nuptial children appear to be born into stable de facto relationships in the older age group categories. Such a tendency could provide a plausible *explanation* for the higher ex-nuptial fertility of older women in Australia. It does not, in itself, explain it away.

For example, Table 1 shows that in 1976 the ex-nuptial birth rate for women aged 25 to 29 was almost three times as large as that of girls aged 15 to 19. To explain away this difference in terms of a tendency for older women to declare themselves to be 'married' when they were not, we would have to discover that 173,560 unmarried 25 to 29 year olds lied about their status (while all teenagers told the truth). That is, we would have to find that 38 per cent of supposedly married 25 to 29 year olds were lying.¹ We would also have to find that the proportion of these women who bore children told the truth about their child's

status when they had already committed themselves to a deception about their own.

It may, of course, have happened in this way, but this is for Carmichael to demonstrate. Problems with the reliability of the base data mean that we should be careful in interpreting rates, especially when differences over time and between groups are small. But, without evidence to the contrary, it seems reasonable to consider that the broad changes over time and differences between age groups shown in Table 1 represent real changes and real differences.

Carmichael is right to emphasise the possibility that official statistics may be unreliable. He is wrong, however, to ask us to accept some figures and to doubt others, not on the basis of evidence that some are reliable and others not, but on the basis of his intuition and because, if we follow his intuition, his particular arguments about the figures will be supported.

As he acknowledges, Carmichael's proposed measures, his 'ex-nuptial conception resulting in ex-nuptial confinement' and 'ex-nuptial conception resulting in nuptial confinement' rates, do not confront the difficulties discussed above, nor were they intended to. It seems also that they were not intended to control for increases in the size of the population used in the denominator which may have occurred during the period of gestation.

They do, however, have this effect, and, in a population like our own that is continuing to experience relatively rapid growth, this could be an advantage. For example, the number of women aged 15 to 44 is estimated to have increased by 2.3 per cent between June 1980 and June 1981. The increase was not experienced uniformly across the age groups: the number of girls aged 15 to 19 is estimated to have decreased by 0.74 per cent while the number of women aged 35 to 39 increased by 4.25 per cent.² In principle Carmichael's rates would allow us to control for this.

Given problems with the reliability of the base data, and the added complexity that the rates would introduce into our understanding of demographic change, I would argue that the attempt to control for this bias is unwarranted. Nevertheless, in the face of Carmichael's concern about the unknown biases that may affect an ex-nuptial birth rate, it is odd that he considers a control for a known bias to be no advantage at all.

The position is clear. The rates he proposes are not to be used because they may increase our understanding of the real world. Rather they are to be used because a 'bridal' birth rate is 'logical nonsense' in its simple form. It is not acceptable until the data it is based on have been statistically laundered by being lagged backwards for 38 weeks. This, as we have seen, is absurd.

The measures Carmichael proposes are not more valid or more reliable than the measures he would replace. They are simply more complex, more esoteric, and more inaccessible to the non-specialist.

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NOTES

1. In 1976 90,634 women aged 25 to 29 are recorded by the census as being never married, widowed or divorced. 4,096 ex-nuptial confinements resulting in live births were experienced by women in this age group. If their ex-nuptial birth rate were 'really' as low as that of teenagers there would need to have been 264,194 women in the denominator instead of 90,634, an extra 173,560.
The 1976 census counted a total of 562,729 women aged 25 to 29, 472,095 of whom were married (including 22,513 married but permanently separated). 83,377 nuptial confinements resulting in live births were recorded for this age group category in 1976. If only 298,535 of these women had been 'really' married instead of 472,095 the nuptial birth rate would have been 279.3 per 1,000 married women instead of the 176.6 per 1,000 derived from the official figures.
2. The figures here are derived from *Estimated Resident Population by Sex and Age: States and Territories of Australia* (ABS, Catalogue No., 3201.0). The totals estimated for women aged 15 to 44 in 1981 were rather larger than the number counted in the census which missed 1.86 per cent of the population. (Problems of this sort underscore the need to be careful about attributing too much to small differences in the rates, and remind us that attempts to control for small changes in population size are probably misguided as our data on them are imperfect.)

REFERENCE

- Betts, K., (1981), 'Ex-nuptially Conceived Births: A Note on Measurement', *The Australian and New Zealand Journal of Sociology*, 17, 3, 53-56.