

Gender and the Measurement of Fertility: A Case Study in Critical Metrology

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Human fertility is in an apparent state of crisis. In July 2017, scientists reported that sperm counts among men from North America, Europe and Australia have decreased by 50–60% since 1973, with no sign of halting (Levine et al. 2017). For women, the story is bleak and familiar: women's fertility decreases with age, yet women are waiting longer than ever to have children (Kincaid 2015). Undergirding these crisis narratives is an unstated assumption: fertility is measurable. That is, scientific reports that fertility is declining presuppose that it's possible to successfully measure and compare fertility diachronically. In this paper, I investigate this assumption by examining the practice of fertility measurement, i.e. the standards, methods and instruments by which the phenomenon of fertility is quantified. By comparing two commonly used fertility measures – semen analysis in men, and ovarian reserve testing (ORT) in women – I show how gender ideologies play a role in constructing fertility as a measurable phenomenon. I conclude by arguing that, in the case of semen analysis and ovarian reserve testing, it's not just fertility that's being measured, but also degrees of adherence to traditional Western norms of masculinity and femininity, and, more precisely, to cultural conceptions of motherhood and fatherhood (Almeling 2011).

This paper also has a methodological aim. Important philosophical work has been done in investigating measurement as a metaphysical and epistemological phenomenon (see Tal (2017) for an overview). This paper is intended as a contribution to a growing movement in analytic philosophy towards seeing measurement as a significant site for investigating the role of social and political values in science. This approach – which I propose we call 'critical metrology' – is what I attempt to demonstrate through my analysis of fertility measurement.