Childbearing preferences, reform of family planning restrictions and the Low Fertility Trap in China

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Abstract

China's fertility rate is currently estimated to be between 1.4-1.6; however period TFRs in certain urban settings such as Beijing and Shanghai are some of the lowest ever recorded, falling as low as 0.6. In this context, China as a nation is ageing rapidly. As the population of urban centres become increasingly less able to 'reproduce themselves', there is a 'floating population' of over 200 million workers from rural to urban areas. However, in the context of lower fertility in the sending (rural) areas, wage inflation is threatening China's position as the 'factory of the world.'

In recent years, scholars have increasingly called into question the claim that the fall to low fertility in China was primarily driven by family planning restrictions; instead that economic development, urbanisation, and the development of improved educational and employment opportunities. In this view, China – and urban areas in particular – share more in common with other low fertility settings in Pacific Asia than perhaps previously recognised. The 'Low Fertility Trap Hypothesis' suggests that if fertility stays low for a prolonged period, a series of mutually-reinforcing demographic, economic and sociological mechanism serve to make the future increase of birth rates harder.

Fertility preferences, as measured through *ideal* or *intended* number of children have been employed by demographers in a variety of ways. In Europe, fertility preferences have invariably been higher than actual fertility, suggesting that under certain policy/economic conditions birth rates could be raised. Such preferences also give a broad impression of general attitudes towards family sizes and help to test whether there are particular societal 'norms' (such as a 'two-child norm').

While mean ideal family sizes in Europe tend to above replacement-level, some recent studies have identified sub-replacement ideal family sizes in low fertility Pacific Asian settings such as Hong Kong and Taiwan. Furthermore, a number of studies have concluded with similar findings for China. In this paper, we review a large array of surveys of fertility preferences in urban China covering the period from the implementation of the one-child policy in 1980 through to 2009. While there are a number of clear limitations to both the review and the constituent surveys, we find indicative evidence of widespread below-replacement level fertility preferences. These concur with other national level surveys.

Despite much further investigation being required, this study provides further indicative evidence that the fertility preferences of Chinese urban dwellers may be at a level similar to their currently low levels of cohort fertility. If this were to be the case, this adds to a growing body of evidence which suggests that China may have fallen into the 'Low Fertility Trap'.

1. Background

1.1 Defining childbearing preferences, and placing them on the gendered life-course

The literature on fertility ideals and intentions is wide and expanding. In the context of modern contraception and increased female autonomy, gendered attitudes towards fertility ideals and intentions are instrumental to understanding the dynamics of the contemporary family (Bongaarts 2001; Billari, Philipov, and Testa 2009; Schoen et al. 1999). As Schoen et al. (1999) observe, 'fertility is the purposive behaviour that is based on intentions, integrated into the life course, and modified when unexpected developments occur.' In this section, we explore how these intentions might be formed, how they shaped (and are shaped) by the life course and how they – in tandem with myriad other forces – translate into different levels of fertility.

Defining childbearing preferences is fraught with difficulties. When a respondent to a survey is asked about their childbearing preferences, the framing of the question is critical. Below are some examples of different typologies of question related to fertility preferences, which have been identified in surveys:

Q1 What is your ideal number of children?
Q2 How many children should a person have?
Q3 How many (more) children would you like to have?
Q4 How many (more) children do you intend to have?
Q5 How many (more) children do you plan to have?
Q6 How many children of each gender would you like to have?
Q7 How many children of each gender do you intend to have?
Q8 If you could start over again, how many children would you liked to have had?

While all of these questions probe childbearing preferences, each fundamentally addresses a (subtly) different issue. Q1, while a very frequently asked question is a somewhat infuriating one as it is so broad and could, in general, elicit any – possibly unrealistic – response. Q2 seeks to identify societal norms, but responses can (will) be driven by highly normative concepts of family size as well as economic, cultural and environmental argumentation. Q3 is a more generic question probing ideals, while Q4-5 becoming gradually more concerning with intentions and then planning. For example, a person might *ideally like* to have seven children, but in reality only *plans* to have two because, perhaps, of their partnership, or prevailing social norms or economic realities. Again, however, there are certain semantic differences. A further key differentiation which is often brought into these survey

questions is achieved through the introduction of a qualifying statement of *certainty* – which, itself, is often then further qualified by a *time* dimension. The *Eurobarometer* surveys, for example, include such constructs (Testa 2007). Q3 can be just as likely be interpreted as an 'ideal' given the highly ambiguous nature of the term 'would you like'. Q6-7, or similar variants, have been found in a number of surveys, not least in East Asia (e.g. Taiwan Fertility and Employment of Married Women Survey: 'Number of children do you (or your spouse) expect to be borne in the future: ___ boys; ___ girls'.) Initially, this question might be viewed in terms of an 'ideal' scenario – however, in the context of widely practiced prenatal sex-selection, the boundaries between ideation and *intention* in this regard become exceptionally blurred. Finally, Q8 is frequently deployed in surveys either as a stand-alone question, or as an alternative to an earlier question, often reserved for women either beyond reproductive age. This, of course, is a slightly peculiar hypothetical question which, in some ways, requires a leap of imagination to interpret. For example, if there were to be a mismatch between the respondents actualised fertility and her hypothesised retrospectively desired fertility, it would almost impossible to disentangle micro- and macro-level influences. Finally, these semantic issues can be exaggerated where surveys are translated wither in the context of cross-national comparative studies, or even in the simple translation of questionnaires to be used by non-native scholars.

Of course, whichever measurement we employ will, ultimately, be shaped and altered by the prevailing life course situation. For example, numerous incidents along the life course can alter and reshape childbearing preferences: having children, of course, being the most obvious one. Very few respondents, for example, state a fertility preference *below* the current number of children which they have (at least in developed settings) so childbearing itself can lead to both an upward revision of preferences as well as a differential baseline. On the other hand, a set of incidents and scenarios can serve to form constraints on the meeting of preference and/or cause the downward revision of fertility preferences. These might include not having found a suitable partner, partnership instability, fecundity issues or other unexpected events (Iacovou and Tavares 2011; Barber 2001; Liefbroer 2009). Critically, though, childbearing preferences are presented as being *dynamic* throughout the life course, altering in tandem with age, partnership status and, as we shall discuss below, broader societal, cultural and economic contexts.

Finally, there will also be important differentiation derived from *who* one asks. From a gendered perspective, in Europe at least women generally report slightly higher ideal family sizes

than men (Testa 2012). Furthermore, the prevailing gendered roles in given societies can also shape both individual preferences, and the means by which they can be actualised in a coupled setting.

In this section we have sought to identify how information regarding fertility preferences is gathered in surveys, and to understand the parameters of what that information holds – especially when considered in a life course perspective. However, fertility ideals and intentions fit in a number of broader theoretical constructs – some of which seek to *explain* given preferences, while others *employ* said preferences into broader theories of demographic change. In the following two sections we explore these before reviewing the relevance of fertility preferences and the application of such research to China.

1.2. Fertility intentions and cognitive behaviour

Ajzen's Theory of Planned Behaviour [TPB] has been adapted by demographers to try to situate fertility preferences in social-psychological reasoning model (Dommermuth, Klobas, and Lappegård 2011; Philipov et al. 2009; Ajzen 1991). As Figure 1 shows, intentions are formed out of attitudes, subjective norms and perceived 'controls' which, in turn, are shaped by background factors such as values, personalities, gender, age, education and so-on. These background variable, meanwhile, are in turn moulded by meta-societal norms and cultures. Intentions are then translated into fertility realities, though mediated through actual enablers and constraints, further perceived controls and the policy, economic and social context. For our understanding of Chinese fertility preferences, clearly the concept of perceived control, or perceived behavioural control, is of critical importance as the model assumes that it shapes both the preferences themselves, and then the translation of those preferences into fertility behaviour.

Figure 1: A Theory of Planned Behaviour Model of fertility decision making
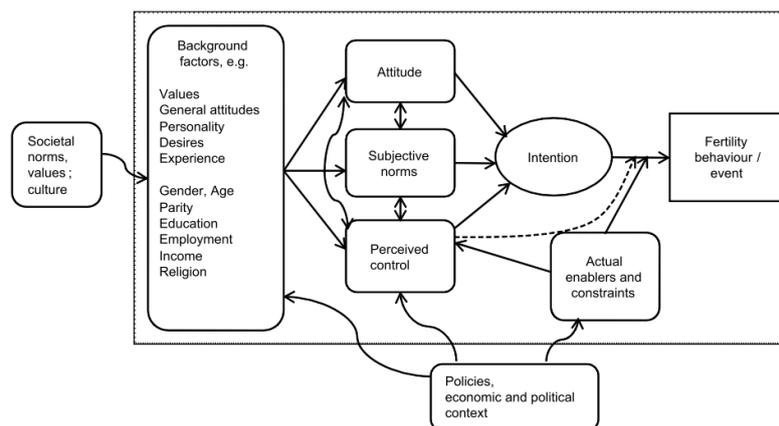
Source: (Klobas 2011)

Warren Miller's 'Traits-Desires-Intentions-Behaviour' [T-D-I-B] framework follows a similar logic (Miller 2011). Miller's sequence begins with generalised positive and negative motivational traits regarding childbearing; these traits then lead to various desires for or against having children which in turn play a role in shaping various fertility intentions. The sequence is completed by behaviours which either achieve or avoid the preferred childbearing. Critically, though, Miller's framework seeks to site the formation of such fertility preferences in a biological understanding of human behaviour. In particular, the T-D-I-B motivational traits are conceptualised in terms of bonding schemas derived from neural structures which shape and organise the perceptions we have of others. For Miller, fertility desires straddle two particular bonding-motive systems: firstly a more primitive, mammalian trait of automatic bonding desires, and secondly a more highly evolved, more *human* trait driven by a cognitive evaluation of decisions, intentions, planning and implementation. For Miller, the Theory of Planned Behaviour characterises the second of these bonding schemas well (2011, p.78).

A third theoretical system, proposed by Morgan and Bachrach (2011), has been constructed in response to a number of criticisms of the TPB. These critiques involve questioning the assumption of a clear *intent* before conception and the general ignorance of other key aspects of the reproductive process, namely having sex, using contraception, access to abortion, working, partnering, marrying. A third criticism focuses on the TPB's statement of the formation of 'a' fertility intention at a given point in time. This, Morgan and Bachrach argue, does not take account of 'life's zigs and zags'. Finally, as a micro-model, the TPB does not adequately incorporate in influence of material constraints and incentives for childbearing. As such, drawing on social (practice) theory and an understanding of dual processes in the brain, Morgan and Bachrach (2011) propose the Theory of Conjunctural Action [TCA]. Being

recursive in nature, the TCA operates *over time* and allows for a 'path dependence that can produce cumulative advantage/disadvantage and allows for serendipity.' Secondly, the TCA privileges automatic responses of humans within conjunctural spaces, or sets of circumstances, over conscious, reasoned deliberation (*a la* the TPB).

Clearly, then, there is significant debate concerning how fertility ideals and intentions are shaped biologically, psychologically and, as we discuss in Section 1.1 above, both at different points in the life-course and by different measurements. However, one thing which each of the (non-exhaustive list of) theories above is explicit about is that fertility preferences must be sited within a much broader, more fluid and dynamic framework of processes. In other words, these preferences are not *static* and should not be viewed in isolation from either the species we are, or the societal constructs in which we reside.

In the next section we consider how fertility preferences play a role in our understanding of broader demographic systems and theories, and how these then translate into policy perspectives.

1.3. What is the point of knowing about fertility preferences?

In the preceding sections we have explored how fertility preferences might be formed from a number of theoretical and life-course perspectives, and the kind of ways by which we can elicit information on them. But what can those interested in population issues actually serve to get out of this data? We might think about the value of understanding fertility preferences from a micro-, and macro-level perspective.

Two important elements might be derived at the micro-level. Firstly, theoretical constructs such as the Theory of Planned Behaviour have been used in conjunction with surveys (such as the *Gender and Generations Survey*) to *quantify* the relative contribution of various elements described above to the formation of fertility intentions and then the translation into realisation (see, for example, Dommermuth et al. 2011; Vikat et al. 2008). This micro-sociological approach tells us much about life-course transitions, but in order to be realised requires a complex and comprehensive set of variables to be gathered and cannot be studied *post hoc* on surveys not designed for that purpose. Secondly, much literature has been generated about the translation from fertility intentions to reality for individuals and couples: however this link is far from straightforward, not

least because of so many alternative life choices competing with reproductive decisions (Morgan and Rackin 2010). If, however, we can gather data on intentions, and link them with certainties (within a temporally defined space), does this allow us to predict, or 'micro-project' childbearing of individuals going forward? In the United States, the most comprehensive study of the relationship between intentions and reality recently found that stated intentions at age 24 for cohorts born between 1957-64 only 'modestly overstate these women's completed cohort fertility of 1.97' (Morgan and Rackin 2010). However, it is of course crucial to remember that there is significant variation around this ultimate mean, with many women 'missing their target', either as a consequence of the high frequency of unplanned pregnancies concentrated among the young and less educated and poor (Finer and Henshaw 2006; Musick et al. 2009) or through childlessness.

On the macro-level, fertility preferences can tell us a number of useful stories about contemporary population systems. Firstly, in a very broad sense they can act as a reflection of prevailing social norms – developed and honed through a shifting and evolving context of structural demographic systems and cultural/economic/social influences. This can act as a kind of 'barometer' for attitudes towards childbearing in terms of *size* of desired families, as well as other dynamics such as *timing* and *gendered composition*. For example, in the context of the current economic crisis in Europe, we have seen uncertainty regarding reproductive timing increase significantly in settings which have been disproportionately affected by the recession (Testa & Basten 2012). Related to this is the notion that if there is a gap between preferences and reality, this can somehow be 'met' by some external intervention. In developing settings with high rates of fertility, this might be met through meeting an 'unmet need for contraception', or improving female empowerment or education for example (e.g. Casterline & Sinding 2000). However, in low fertility settings – defined most broadly as having sub-replacement level fertility rates in low mortality settings, or around 2.08 – childbearing preferences are generally reported to be *higher* than actualised fertility. Indeed, the cross-sectional *Eurobarometer* survey shows that more than one third of European women and men stop childbearing with fewer children than those initially desired (Testa 2012). In the context of fertility rates across Europe being – with a few exceptions – well below 2.0, the European Commission has, in the past, used evidence of the gap between fertility intentions and reality within the EU to suggest an 'unmet need' for children which could be met by policy interventions (Philipov et al. 2009).

Secondly, and closely related to this, we can use fertility preferences to identify the extent to which there is any such thing as a 'two-child norm.' There appears to be an implicit assumption (sometimes *explicit*) that some highly advanced countries which have seen their fertility rates stabilise at around 2.0 – or replacement rate – have reached the end of the (a?) fertility transition. This is translated into convergence settings designed for long range population projections. In the UN's 2010 *World Population Prospects*, for example, all countries currently with sub-replacement fertility were projected to see their fertility increase and then fluctuate around an asymptotic mean of 2.1 (UNPD 2011). Where is this concept derived from? A notion of homeostasis?

Indeed, a two-child family appears to be the dominant ideal of Europeans, which has become entrenched over time according to the Eurobarometer surveys conducted in 2001, 2006, and 2011 (Spéder and Kapitány 2009; Adsera 2006; Testa and Basten 2012). Within Europe, however, an important exception is that in 2004, German-speaking parts of Europe saw the average ideal family sizes given by younger men and women falling as low as 1.7 children (Goldstein, Lutz, and Testa 2003). The fact that these fertility preferences had deviated from 'the two-child ideal' which had 'held such sway since the end of the baby boom' was deemed highly significant. Within the context of some of the lowest fertility rates in Europe reported for the region, the authors of that study stated that it is 'hard to imagine that this re-conceptualisation of family life will be without any consequences, just as it is hard to imagine that low fertility can persist indefinitely without being accompanied by a change in ideals' (Goldstein, Lutz, and Testa 2003). Today, however, only Austria reports a general sub-replacement fertility preference (although among younger cohorts in many countries such as Czech Republic, Poland, and Spain report such preferences and, it should be noted, that countries hard-hit by the current economic downturn have demonstrated fluidity in both stated preferences and certainty of childbearing) (Testa & Basten 2012).

The example from German-speaking Europe, however, as apposite in highlighting a further linkage between fertility preferences and reality(ies), namely through the workings of the so-called Low Fertility Trap Hypothesis (Lutz et al., 2006). This dynamic model of demographic change posits the suggestion that in an era of prolonged low fertility, shifting social norms and population structures make it ever more challenging to raise birth rates (see Figure 2). This occurs through three mechanisms – one demographic, one economic and one sociological. Firstly, low birth rates lead to fewer women of reproductive ages and, hence, generally fewer births

(net of immigration). The second mechanism is shaped by the possible economic consequences of an ageing population which Lutz et al. (2006) characterise as being shaped by lower economic growth, less social security for the young and – hence – an increasing gap between aspirations and expected income, especially in settings characterised by high rates of human capital. This then translates into postponement of childbearing which impacts upon period fertility, or limiting or even foregoing of childbearing which impacts upon cohort fertility – and hence creating a negative feedback with the first demographic mechanism listed above. The third, sociological mechanism, assumes that, through socialisation and social learning, family size ideals are influenced by the experiences of younger people. Hence in an environment with few children (e.g. siblings, larger families), children will figure less prominently in their own image of a desirable life (not least mediated through changing media representations of the family). Not only does this feed directly into personal ideal family size – and then, hence into cohort/period fertility, but this also impacts upon the consumption aspirations of the young through increased investment in smaller numbers of children. Therefore, this sociological mechanism potentially provides a negative feedback into both the economic mechanism, as well as directly into the demographic mechanism.

Figure 2: The demographic (LFT-1), sociological (LFT-2) and economic (LFT-3) mechanisms that constitute the Low Fertility Trap Hypothesis
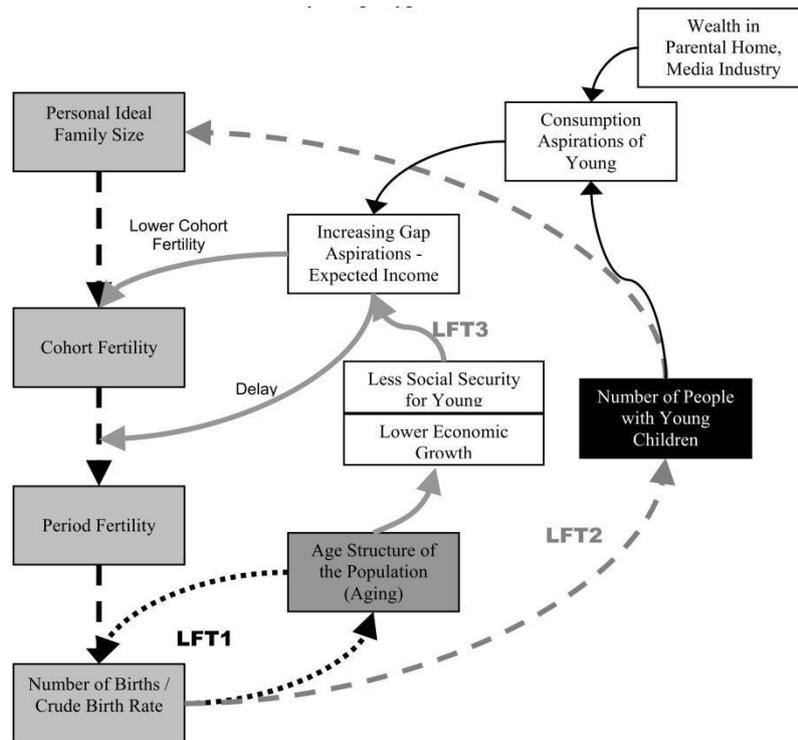
Source: (Lutz et al. 2006)

1.4. Fertility in China

China, along with many of her East Asian neighbours, has seen a dramatic decline in fertility over the past four decades. From 1970 to 1979 – during the era of the *Later, Longer, Fewer* family planning programme, the Chinese National Bureau of Statistics estimate that period total fertility rate fell from 5.81 to 2.75 (Gu and Cai 2011). However, defining the current fertility rate in China, as well as past historical trends, is fraught with difficulties. (Lutz 2007), for example, presents not just one but *31* different estimates for the pTFR of China in 2000 gleaned from the methodologies of 19 different authors. These *national* pTFRs range from 1.22 (National Statistics Bureau (China) 2002) up to 2.3 (Liang 2003).

As part of the 2010 UN Projections, Gu & Cai (2011) sought to survey all of the recent estimates of fertility in China both as baseline data and in their recent historical context. Their results are to be found in Figure 3 below.

Figure 3: Estimate recent trends in Chinese fertility from various sources, 1980-2010
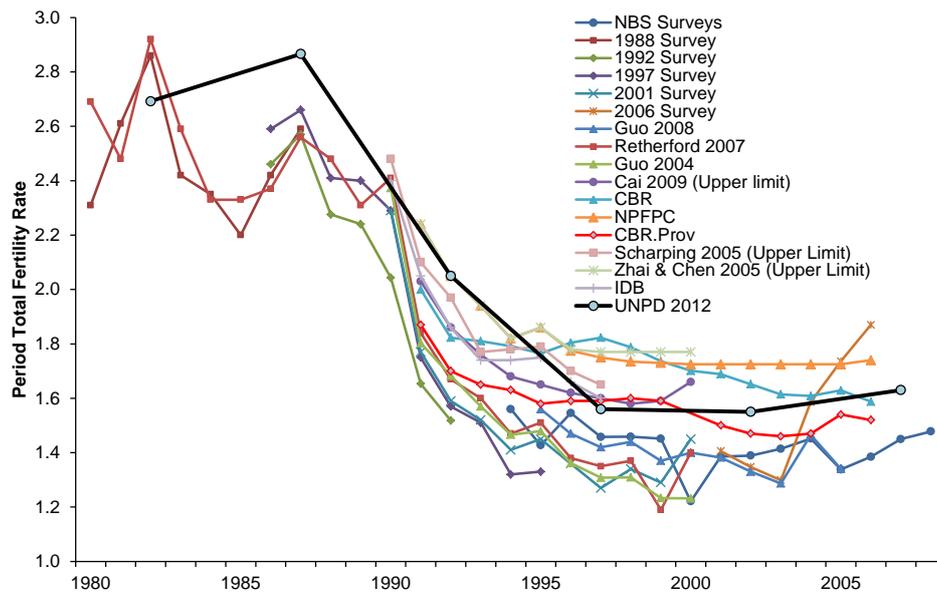
Sources: see Gu and Cai 2011

But what are the reasons for such discrepancies? Firstly, different studies estimations employ different methods. Some studies (e.g. surveys 1988, 1992, 1997, 2001, and 2006 surveys conducted by the National Bureau of Statistics) are based upon unadjusted survey results which collect current and/or historical data on fertility, while others are indirect estimates based on demographic exercises using sources such as censuses (Retherford and Choe 2005; Guo 2008) or school enrolment data (Cai 2009; Scharping 2005; Zhai and Chen 2007). Furthermore, each method of calculation has its own particular pros and cons (Zhang and Zhao 2006). There is, for example, considerable debate regarding the severity of undercounting of births and the effect that this might have on any forthcoming vital statistics (Merli and Raftery 2000; Merli 1998; Morgan, Guo, and Hayford 2009). Despite this, a number of scholars have either played down the significance of under-reporting, or have created tests and weights to counterbalance the effect (see, for example, Cai 2008; Feeney and Yuan 1994; Retherford et al. 2005).

The three school enrolment based estimates in Figure 3 are generally higher than other estimates, yet as Cai (2009) demonstrates, these figures must also be treated with caution. Structural factors such as economic incentives and shifting dynamics in migration can easily inflate enrolment numbers, while changes in China's education system and population age structure would also lead to the overestimation of cohort size if these factors were not appropriated checked.

There are some cases where the sample on which the fertility rate is calculated is simply biased. For example, '2006 Survey' listed in Figure 3 over-sampled women who were married,

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lived in rural areas or had a lower level of education. After appropriate adjustment, fertility in this survey is, in fact, 1.4 in 2006 (Morgan, Guo, and Hayford 2009).

Finally, there are differences between Chinese Government agencies in which TFR is reported. For example, in 2006 the National Bureau of Statistics (NBS) officially acknowledged that the Chinese TFR had reached 1.6 by 2005. However, the other Government agency responsible for providing fertility statistics, the National Population and Family Planning Commission (NPFPC), 'has been reluctant to accept that fertility has fallen to a level well below replacement, and maintains that [the] fertility level in China is still around 1.8' (Cai 2009). Furthermore, both NBS and NPFPC adjust their data to take account of underreporting, but the assumptions and procedures followed are not publicly available.

In sum, however, the national fertility in China is *low*. This translates into China having one of the most rapidly ageing populations in the world, running the risk that as a nation is will 'get old before it gets rich' (Lutz et al. 2008; Mai et al. 2013).

A number of recent studies have forcefully argued that the role of China's family planning policy – and the erroneously named 'One Child Policy' in particular – in driving and keeping down fertility has been overstated. There are so many exemptions and special rules as to render it less relevant for a wide swathe of the population (Gu 2007), and married couples comprised of only-children are allowed to have a second child (Merli & Morgan 2011). As such, an almost *de facto* 1.5-2 child policy is in place across much of the country. Indeed, as Gu (2009) observes, "The majority of the Chinese population (more than 70 percent) live in areas with a policy fertility level at 1.3 to 2.0 children per couple" (p.80).

According to an exercise examining China's fertility policies based on local regulations and population size from the 2000 census, if all Chinese fully followed the local birth control regulations, more than 60 per cent of Chinese couples would end up with only one child. The overall fertility targeted by the Government's fertility policy for China as a whole would be at 1.47, which is far below replacement level (Gu et al. 2007).

A core reason for this, cited by numerous studies, is that many macro- and micro-level economic and social processes seen elsewhere in East Asia – not least rapid economic development, urbanisation, educational and employment opportunities – have coincided with the implementation of the policy and have played a key role in driving down fertility and, for some scholars, keeping it low (Wang, Cai, and Gu 2013). Indeed, in some provinces these changes were especially keenly felt.

Indeed, when disaggregating at a provincial level using the 2005 by-Census, 151 million citizens live in provinces with a TFR of <1.0, 442 million in provinces of <1.2 and fully 584 million in provinces with a TFR of <1.3. Indeed, the ultra-low fertility rates (<0.9) reported in Beijing, Shanghai, Tianjin and other major urban centres go way beyond policy restrictions (Basten, Lutz, and Scherbov 2013). In other words, the link between 'policy' and 'actual' fertility levels in many parts of China appears to be broken (Gu and Cai 2011).

1.5. Post-family planning restriction reform and the Low Fertility Trap

The evidence presented above strongly suggests that one-child/small families have been normalised and internalised through 'the combined force of a rapid increase in education, modernisation, urbanisation and government propaganda' (Cai 2012). These, in turn, built upon the non-coercive family planning policies of the 1970s – which had much in common with other Asian family planning programmes (Wang 2011; Wang, Cai, and Gu 2013). Furthermore, the prolific economic growth seen in much of China – particularly in urban areas – has mirrored change elsewhere in Asia.

All of this is important as we look to the future. There appears to be a sense among some policymakers and commentators that a restrictive population policy in China is needed as a kind of 'control mechanism' which, if broken, will cause fertility to unambiguously race out of control. This is no more clearly elucidated than the oft-quoted sentiment that the policy prevented the birth of hundreds of millions of children 'into poverty'. The links between fertility and development and the lessons from elsewhere in Asia might suggest otherwise.

There is currently much debate about the future of the family planning restrictions in place in China following both increasing concerns over its economic/demographic impact as well as a series of particularly egregious alleged abuses (Chin 2012). As such, it is of enormous contemporary importance to plan for possible futures of China's population under particular types of policy reform. Perhaps the most comprehensive such study was published in 2007 by Zeng (2007). He compared five different possible policy reform scenarios and calculated their impact on a number of key demographic and economic indicators such as the marriage squeeze, pension deficits, labour force trends and other socioeconomic outcomes. In particular, as well as examining restrictions on *quantum* of childbearing, he examined the impact of different speeds of implementation. Ultimately, he idealised a three-stage so-called 'soft-landing' reform strategy which would end with a

complete lifting of all restrictions by 2032 via a two-child policy from 2014 and a transition period from the present. As we discussed above, however, there is a sense that the link fertility and policy has been somewhat broken. Indeed, Zeng readily admits that 'fertility preferences in China have changed remarkably since the 1980s' and that these new attitudes make it hard to see the true impact of policy changes. Given that fertility intentions and ideals have been shown to be powerful predictors of fertility at the individual level, it is clear that this is an important mediator of possible future policy change. In other words, we can use evidence regarding fertility intentions and ideals – sometimes counterfactually when asked about ideals in the absence of policy – to examine the possible future trajectories of fertility under different policy reforms.

This can also help us to understand the extent to which China may have fallen into the 'Low Fertility Trap. Despite the extremely low fertility in East Asia, studies of fertility intentions are relatively few – and many of those do tend to confirm the stubbornness of the measures to deviate from at or above two. Indeed, as McDonald states, 'if these studies and their interpretations are correct, advanced Asian countries are not yet in the situation of the "low-fertility trap" where individual ideal fall to a level that corresponds with the number of children that people are actually having' (McDonald 2009). However, some recent studies have suggested that – in some settings at least – this threshold may have been broken in Chinese settings. Hong Kong was a British territory until 1997 upon which it was returned to China and given the status of 'Special Administrative Region'. Taiwan has been subject to a different set of laws and regulations from Mainland China since 1949. While both Hong Kong and Taiwan certainly saw widespread family planning initiatives in the last half-century, nether territory has a history of the proscriptive family planning restrictions as seen in Mainland China. A recent study has found that in both of these settings, mean ideal family size [MIFS] has fallen to rates well below those seen in Europe (Basten 2013). In Hong Kong, the MIFS reported among young females aged 18-27 fell from 1.8 in 1991 to 1.6 in 2001 and 1.5 in 2011. Similarly in Taiwan, among women aged 18-24, the MIFS declined from 2.1 in 1993 to 1.8 by 2003, with fully 24.2% of young people in Taiwan stating a mean ideal family size of one or fewer children compared to 6.7% in 1993 and 11.4% in 2000.

In the next section we review the current literature on fertility preferences in China. Before doing so, it is important to return to the discussion in Section 2.1 regarding the questions which are asked and, indeed, the issue of [perceived] social control posited in the Theory of Planned Behaviour as being a key

determinant in both shaping preferences and their transmission into reality. In China, prevailing family planning restrictions mean that given *intentions*, or planned fertility might, in itself, be proscribed. Take urban couples, who are almost universally restricted to having just one child. For such a respondent to state an *intention* to have three children, or that they *plan* to have three children would be unfeasible under the current policy proscriptions.[1] As such, where the respondent gives a 'proscribed' response, then this can only be interpreted as a stated *ideal*, or *preference*. As such, most studies of Chinese fertility preferences tend to report a so-called 'mean ideal family size' [MIFS], or a percentage distribution of each number of children desired. On the other hand, if a respondent gives a response of an ideal family size of one child, it is again hard to disentangle the extent to which this is either an *ideal*, a *preference* or − in the context of current legislation − a 'politically correct' response. Indeed, responses to a conference presentation given by one of the authors on the widespread ideation of one-child families in Shanghai (Basten, Lutz, and Ren 2010) repeatedly made this point: that respondents say that they want to have one child because they are *supposed* to have one child. This point is absolutely central to the study of stated fertility preferences in China, and will be covered in greater depth later.

However, this is where a deeper understanding of the heterogeneous implementation of the Chinese family planning restrictions. Indeed, as specific birth policies are set by each province, there can be difference both between and *within* provinces in terms of implementation (China.org.cn 2002). For urban couples, a number of provinces and municipalities have stated that if a couple are both only-children then they will be permitted to apply for a permit to have a second child (Basten, Lutz, and Scherbov 2013). Meanwhile, for rural couples, migrants and minority groups there is a multiplicity of different restrictions and regulations based upon location, age, prior births, marital status and so on (Gu 2007).

Given the relatively large range (in a generally low fertility setting) of the parameters of permitted childbearing in China, therefore, it is very challenging to commit to presenting national, all-encompassing figures; as these will fail to account for heterogeneity in regulation as well as how these might be

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[1] Despite this, it is widely known that many wealthier couples with one child flout the ban and have a second child because they can easily afford the fine, or 'social maintenance fee' imposed for doing so. The fine or fee varies between counties and provinces but is usually a multiple of between three and ten times the average after-tax income in the city in which they live (Zhang 2007).

translated into stated ideals and intentions. Despite this, a number of attempts using nationally representative sample surveys have been made to show some national trends (see below). In the meta-review in this paper, however, as we are reliant upon local studies we concentrate on surveys performed on the fertility preferences of non-migrants *urban* areas in order to minimise the inherent heterogeneity.

In the next section we review the existing literature on fertility preferences in China.

1.6. National studies of fertility preferences in China

In 1987, Whyte and Gu published a meta-review of studies concerning fertility ideals and intentions in China (Whyte and Gu 1987). This was one of the first major efforts to draw together the findings of a wide array of studies. Despite the fact that the data used were derived from 'scattered locales' and that many of the studies 'did not use the best methodology', Whyte and Gu were able to conclude that 'it is not simply that fertility has dropped sharply in advance of substantial economic development…It also appears that the attitudes and aspirations of Chinese peasants have been at least partially 'modernized'', as reflected through some success in driving down ideal family size preferences. Empirically, Whyte and Gu found Mean Ideal Family Sizes (MIFS) in six urban settings [1983-85] of 1.50-1.81 with an outlier from Zhejiang Province at 1.15. In 10 rural areas for 1982-1985, the range was 1.56-2.49, with a 'meta-mean' of 1.98. Our analysis includes the studies used by Whyte and Gu and follows the same spirit as their exercise.

Since then, a number of studies seemed to have confirmed the presence of a national downward trend in national (or multi-provincial) MIFS. In 1992 a sample survey in 10 provinces conducted by the Population Institute of the Chinese Academy of Social Sciences (CASS) found that among women with clear preferences, the MIFS was 1.65 for urban wives and 1.89 for rural wives (Zhang 2004). On a nationwide scale, this was the first time that the reported MIFS appeared to fall below two children.

In 1997, a survey conducted by the then *State Family Planning Commission* (SFPC) found that 61.5% of rural women and 51.5% urban women preferred two children, while the ideal number of children for 25.1% of rural women and 42.2% of urban women was just one. This translated into a national MIFS of 1.77 in 1997, 1.83 in rural areas and 1.58 in urban areas (Zhang 2004). An independent survey performed in 16 provinces reported a MIFS amongst all respondents aged 16-70

of 1.78 under the constraints of prevailing family planning policies, and 2.04 without such constraints (S. Chen and Zhang 2003).

Finally, Zhang has analysed the 2001 nationwide SFPC survey and found a MIFS among married women aged 20-49 in urban areas of 1.46 and 1.81 in rural areas (Zhang 2004). In urban areas, 50.6% women aged 20-49 wanted one child, 45.6% two and just 1.5% more than two; meanwhile in rural areas the figures were 26.7%, 64.8% and 8.4% respectively.

Importantly, Zhang's study also examined differentials in reported MIFS by educational level, ethnicity, level of regional economic development and age of respondent. In each case, a negative gradient can be observed. For example, among married women aged 20-29, 18.3% of women without schooling [MIFS 1.94] desired one child compared to 64.7% educated to high school level or above [MIFS 1.34]. Similarly, among the same group in 'advanced' economic areas the MIFS was 1.39, compared to 1.66 in 'middling' areas and 1.96 in 'backward.' For women desiring more than two children the difference was even more marked – 0.2% in 'advanced' areas' and 12.0% in 'backward areas.' Finally, minority ethnic groups report a generally higher MIFS than their Han counterparts – possibly because of their historical exemptions from many aspects of family planning policy.

1.7. Regional studies of fertility preferences in China

While Whyte and Gu's 1987 study was, in essence, a joining of a number of provincial- or city-level studies, a series of influential individual provincial-level analyses have been performed.

Greenhalgh et al.'s important studies of Shaanxi province found that between 1988 and 1993 rural villagers adapted to the restrictions by adopting a growing acceptance of daughters (Greenhalgh, Zhu, and Li 1994). Meanwhile, in the north-eastern province of Jilin, Choe and Tsuya (1991) found a MIFS among female peasants aged 15-59 of 1.95 in 1985, declining to 1.6 a decade later.

Basten et al. (2010) found strong evidence of low mean childbearing preferences among Shanghai's registered population which, according to official surveys, fell from 2.04 in 1983 to 1.63 in 1994, 1.52 in 1998, 1.10 in 2003 and 1.07 in 2008, despite the fact that a sizable number of couples would be free to have two children under the official policy as they are both singletons and respondents were explicitly asked to consider a future without any policy restrictions. Furthermore,

the desired family size of migrants who come mainly from rural areas with higher rates of fertility, while higher than indigenous Shanghainese, is still very low – especially when compared to other rural Chinese provinces. Merli and Morgan (2011), using the Shanghai Sexual Behaviour and Sexual Networks survey found similar results. They found that 66.1% of those eligible for a second child did not intend to do so.

Finally, a recent extensive study of women in six Jiangsu counties who are entitled to have two children revealed a total ideal family size of just 1.31 (Zheng et al. 2009), with economic considerations cited as the primary reason for a stated preference below the permitted number. The authors of this study concluded that the extremely low fertiltiy in the villages covered by the survey could be explained by factors other than the family planning restrictions, such that government control is no longer necessary to maintain low fertility. Indeed, they remark that 'if China's one-child policy were to be phased out, it is unlikely to lead to an unwanted baby boom in this area of the country' (p.329).

1.8. Reliability?

The extent to which respondents in the surveys discussed above – and, indeed, those which we examine below – are replying in a 'politically correct' manner are clearly crucial. Indeed, a number of studies suggest that Chinese women do, indeed, under-report their childbearing preferences. The frequent inability to gain access to primary data sources often impedes rigourous analysis. Hermalin and Liu (1990) observed that in Whyte and Gu's (1987) review of surveys (discussed earlier), Shanghai appeared to have the largest reported ideal family size – an urban MIFS of 1.81 in 1985, compared to 1.15 in Zhejiang (1984) and 1.50 in Jiangsu (1983), a province which borders Shanghai. This, they argued, was unusual given the extremely low fertility prevalent in Shanghai compared to these other settings (and elsewhere in China) coupled with the extremely high level of economic development in the region. They observed, instead, that the higher reported ideal family sizes were, in fact, an artefact of the method of data collection. In the Shanghai Survey, a special attempt was made in order to ensure the anonymity of the responses, in opposition to the standard face-to-face interviews used in exercises such as the In-Depth Fertility Survey (IDFS). They found that when comparing two surveys of similar populations in Shanghai using similar questions, the rural MIFS reported in the face-to-face IDFS was 1.96 while the MIFS in the generally anonymous Shanghai Survey of Desired Family Size was 2.49. They concluded that 'the true mean desired number of children is at least 25 to 30 percent higher than the mean obtained in the face-to-face

interviews.' Despite this possible undercounting, there is still relatively little appetite for large (>2 children) families. As such, they conclude that 'while the one-child policy is not widely accepted, relatively few Shanghai couples in the early stages of family building would exceed two children, even without government restrictions.'

A simlar result was reported by Wang (1990) in Sichuan Province, who used a binomial probit model is to estimate the probability that family-size preferences are understated. The model suggests that women desire on average 0.5 more children than that which they state. However, unlike in Hermalin and Liu's (1990) study, Wang (1990) found that understating was in greatest evidence among urban, educated, and younger women more sensitive to the government's one-child policy.

Despite this, other local case studies have concluded that the presence of so many respondents opting for 'politically *in*-correct' responses – not least through the very popular notion of having a child of each sex – means that such biases could be less significant as others suggest (e.g. Whyte and Gu 1987; Zhang 2004). In our study below, therefore, we pay special attention to respondents who give 'politically incorrect' responses, and examine their significance for the wider study of childbearing preferences in China.

A final clue as to the extent to which under-reporting is an issue can be found by looking at the evidence presented earlier (and elsewhere, see Basten 2013) on fertility preferences reported for Hong Kong and Taiwan. As mentioned earlier, proscriptive family planning programmes were – and are – absent in both of these settings. Furthermore, if we consider the primary role of economic development, urbanisation and social change in driving down fertility in China (as well as in Taiwan and Hong Kong) as opposed to the primacy of family planning restrictions, then it is possible to draw linkages between (urban) China and these two 'special regions'. That fertiltiy preferences which are well below replacement-rates have been reported in Hong Kong and Taiwan could suggest that these reported levels for China may not, after all, be outliers in the region and/or artefacts of a proscriptive family planning regime.

2. Meta-review of fertility preferences in urban Chinese settings

2.1. Rationale and methodology

In many of the English language studies described, there is frequent allusion to many further studies in Chinese language

demographic journals which point to similar conclusions, frequently for other parts of the country and for other population categories. However, given the limited reach of these journals beyond China and the 'language barrier', most of these studies are little known beyond the Chinese borders.

In order to expand the knowledge base of studies concerning reported ideal family sizes in China, we sought to perform a meta-analysis of relevant literature to be found in Chinese journals. We searched for recent studies on 'ideal number of children', '(mean) ideal family size', 'fertility intentions' and 'fertility ideals' in three of the leading repositories of journal articles in China, namely *WangFang Data*, *CNKI* and *CQVIP*. These articles were screened and 41 articles were gathered together in an MS Access database. Of these, we further screened out studies which concerned only rural areas, or the urban floating population. The reason for this is that, as mentioned earlier, there is too much less heterogeneity in the parameters of 'allowed fertility' in urban areas beyond one child.[2] Studies of urban *and* rural populations which did not differentiate between the two populations in the results were also removed. In addition we utilised and included data from earlier review articles such as those by Feng and Zhang (2008) and Whyte and Gu (1987) which presents outline statistics from a large number of previous studies. For the studies examined by Feng and Zhang (2008), we have relied upon their rural-urban categorisation. Where possible, disaggregated results were categorised and harmonised.

There are, of course, many significant limitations to this study – most of which are the same as those identified by Whyte and Gu in their 1987 review. Indeed, in the words of Whyte and Gu, our data are, indeed, derived from 'scattered locales' and many of the studies 'did not use the best methodology'. Firstly, the structure and *raison d'etre* of the studies vary greatly. In particular, the level of disaggregation of the results provided varies. Secondly, the studies are not methodologically harmonised. Most are survey-based, but some small-scale qualitative studies are reported. We decided to include the qualitative studies despite their smaller sample size in order to maximise the number of studies reported. Thirdly, the reporting of the questions used is often unclear. While the question concerning 'ideal family size' is usually couched in individual

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[2] An important exception to this are urban couples in some provinces who are both only children and who are allowed to apply for a second. However, we know from certain local studies that such couples do not generally differ in their childbearing preference from other couples restricted to just one (Zheng et al. 2009). Indeed, evidence suggest that while many such couples apply for the license to have a second child, relatively few actually proceed to have the baby (Hou, Ma, and Huang 2008; Hou and Ma 2008).

terms, sometimes it is unclear whether or not the questions are meant at a societal level – i.e. compare 'what is *your* ideal number of children as an individual' and 'what is *the* ideal number of children for an individual to have.' This consistency in questioning is especially important given the role of policy. Many studies explicitly ask respondents to answer 'as if there were no policy restrictions'. However, some are not explicit on this. We will address this in greater depth in the 'Discussion' Section. It is also possible to raise concerns over possible data manipulation by authors or state authorities. We believe that while important to bear in mind, such a course of action is almost impossible to identify and/or compensate for. Finally, we need to consider the 'politically correct' under-reporting issue raised above. Again, we discuss these issues in greater depth in the 'Discussion' section.

Given the number of constraints issues highlighted above, our level of analysis is necessarily quite rudimentary. Here, we simply report the preferred 'ideal family size' and the calculated mean ideal family size. This measurement, again, has numerous constraints, with many studies questioning what 'ideal family size' really *means* in practise. For example, there will be clear differences by age and parity as well as by the particular family planning policy regime of the given area under study – even after confining to urban areas. Finally, any attempt to perform analysis on a more statistically enhanced level is hampered by the fact that not one of the articles contains a regression analysis.

Despite these many constraints, we feel that the dearth of reference to Chinese language literature on childbearing preferences in the *English* language literature warrants such an analysis, imperfect as it may be. The reported ideal family sizes can act as a 'bellwether', or simple indicator of societal and individual attitudes towards childbearing. As we conclude, such a meta-analysis needs to be validated or challenged by in-depth sociological study.

2.2. Results

In total we were able to identify a total of 37 studies dating from the period 1979 to 2009. While most of the studies were based upon surveys of married women, some considered the preferences of men, and others did not differentiate by gender. The spread of urban areas covered was generally good. As well as 'megacities' such as Shanghai and Beijing, a number of so-called 'second-tier' cities were examined including Taiyuan, Shanxi Province (Wang and Yi 2009); Changzhou, Jiangsu

Province (Yin 2006); Jilin City, Jilin Province (Feng and Zhang 2008) and Harbin, Heilongjiang Province (Zhao 1997).

Figure 4 presents the results of the overall exercise. In order to more clearly demonstrate trends over time and to combine the information given by both the MIFS and the distribution of ideal number of children, we have elected to present the data graphically, combining these two elements on the secondary and primary axis respectively. We have included the province in which the study was carried out, the study's reference in brackets and the year in which the *survey* was carried out in square brackets. All studies are returns of both men and women unless stated. Where sex-specific data were provided in the studies these were represented with (M) denoting male and (F) denoting female.

Figure 4: Distribution of ideal number of children (primary axis) and mean ideal family size (secondary axis), surveys of urban areas
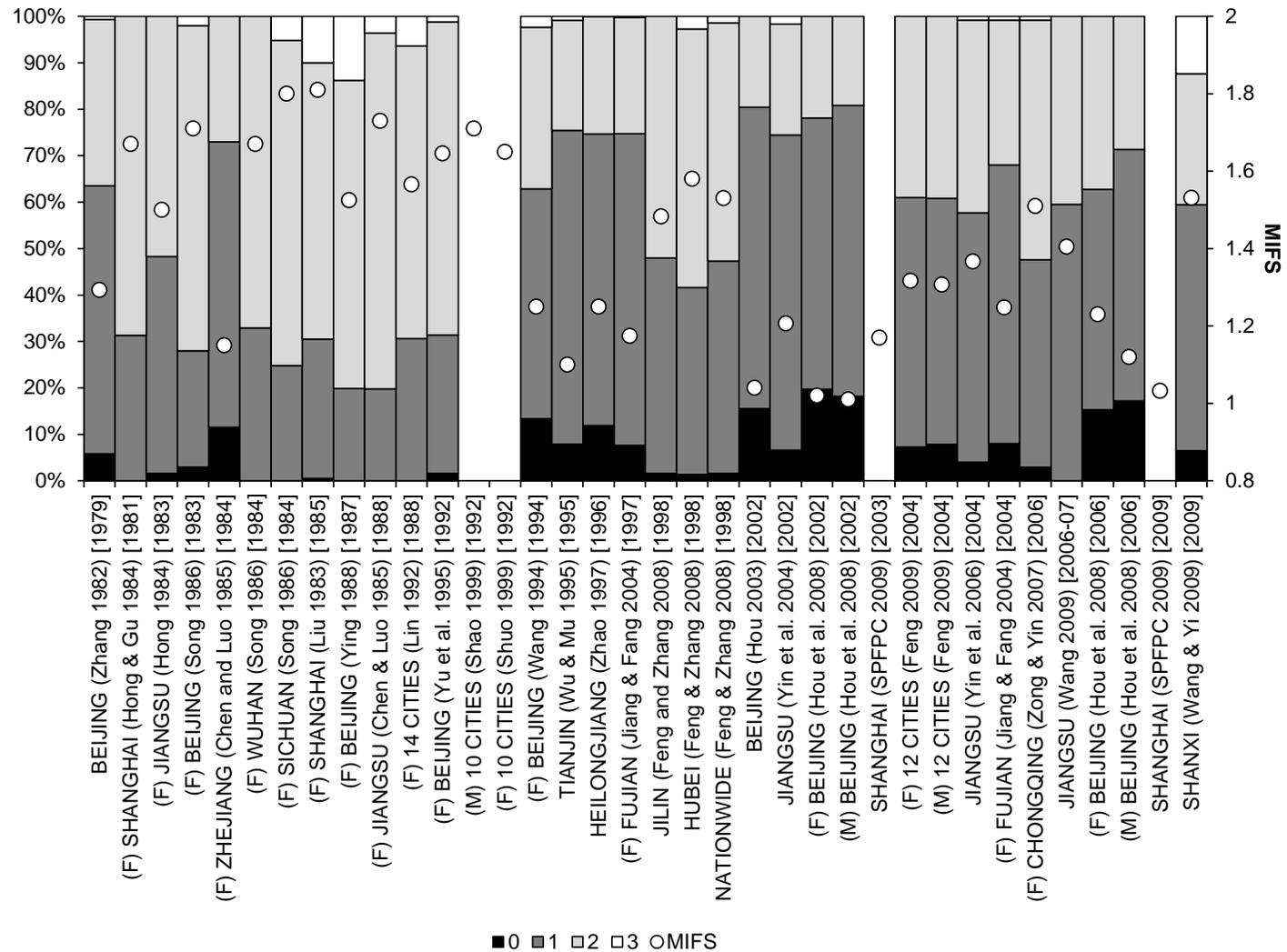
Sources: (Hou 2003)Chen and Luo 1985a; Chen and Luo 1985b; Fang and Yi 2009; Feng 2009; Feng and Zhang 2008; Gao and Gu 1984; Hong 1984; Hou 2003; Hou and Ma 2008; Hou, Ma, and Huang 2008; Jiang and Fang 2007a; Jiang and Fang 2007b; Lin 1992; Liu 1983; Sanyang 1986; Shao 1999; SMPFPC 2008; Sun 1988; Wang 2009; Wang 1994; Wu and Mu 1995; Yin 2006; Yin 2004; Yu 1995; Zhang 1982; Zhao 1997; Zong and Yin 2007

A number of observations are immediately apparent from Figure 4. Firstly, throughout the entire period of 1979-2009, the means ideal family size in urban China remains below replacement-level; indeed, below 1.8. This concurs with the national-level studies discussed above in Section 1.6. Secondly, the mean ideal family size appears to be generally declining over time. If we examine only surveys of women in the data-set (N19), we see a decline from an average MIFS across all studies of 1.61 in the 1980s [sd 0.19, N10], to 1.43 in the 1990s [sd 0.25, N4], and 1.29 in the 2000s [sd 0.22, N5]. Thirdly, there appears to be no significant discernible difference by gender; although the number of observations is small, and therefore require further investigation. Fourthly, the differences between surveys of megacities and second-tier cities seem to be relatively slight. Having said this, Beijing appears to report the highest rates of one-child ideation. Fifthly, ideation of childlessness is relatively low – as *per* expectations. Finally, the similarity of the percentage of respondents who, in the 2000s, state a preference for one child – 56.6% [sd 0.06, N14].

A number of studies allow for a disaggregated view of particular groups or SE characteristics. Some previous studies have identified a positive relationship between sibship size and reported ideal family (Regnier-Loilier 2006). Three studies disaggregated reported ideal family size by whether or not the respondent was an only child (Hou 2003; Yin et al. 2004; Feng 2009). This is an important indicator particularly because couples made of solely of only-children are generally allowed to apply to have a second child. The impact in these four studies in China appears to be small and unclear, with a marginally smaller MIFS among only-children in three of the four studies. Only- children are slightly less likely to report an ideal family size of zero in the studies by Yin et al. (2004) and Feng (2009). However, these results should be interpreted with extreme caution. As we have said elsewhere, in the absence of microdata and regression analysis, it is not possible to determine, and hence control for, possible other determinants of one-child families. Despite this, it does not show that only-children appear to be behaving in any radically different way to those with siblings either by differentially embracing or rejecting a one-child norm.

Generally, younger people report lower ideal family sizes than older cohorts. This, for example, was seen in the latest *Eurobarometer* survey on fertility ideals and intentions in Europe. There are socio-cultural as well as demographic reasons for this related to lower actual family size and, more controversially, Second Demographic Transition characteristics such as increasing individualism, new types of relationship within a couple, different career ambitions, and the declining

effect of religious teaching and family influence (e.g. see Lesthaeghe 2010).

We are able to differentiate by age in two recent studies of Nanjing (Yin 2004) and Feng's (2009) study of urban centres. For Nanjing, Yin et al. report a MIFS of 1.2 for under- 30s compared to 1.3 for over-30s. Similar figures are reported by Feng (2009).

The same two studies also permit a differentiation by education. There appears to be a non-linear pattern in these two studies, with higher MIFS for both the less and more highly educated in both settings (see Figure 5). However, this masks increases in ideation of childlessness in tandem with increased desires for two or more children. Interestingly, Yin et al. (2004) found for Nanjing, Jiangsu Province, that the college educated respondents were the group most likely to report a desire for three or more children (although the number doing so is still extremely small). This fragmentary data sheds a very interesting light on the relationship between income, education, development and fertility in China. The higher *opportunity costs* of the better educated and those with higher incomes may explain the increased childlessness while the ability to better shoulder some of the *direct* costs of childbearing may explain the simultaneous desire for higher family sizes. In order to better understand this 'backwards-J' shaped curve, however, it is necessary to dig deeper into the microdata – not least by examining the difference between men and women. We intend to do this in the next phase of our research. If China continues its relentless economic growth and educational improvements, therefore, the message from these data concerning how this would impact upon fertility is far from clear.

Figure 5: Distribution of ideal number of children (primary axis) and mean ideal family size (secondary axis), two urban surveys
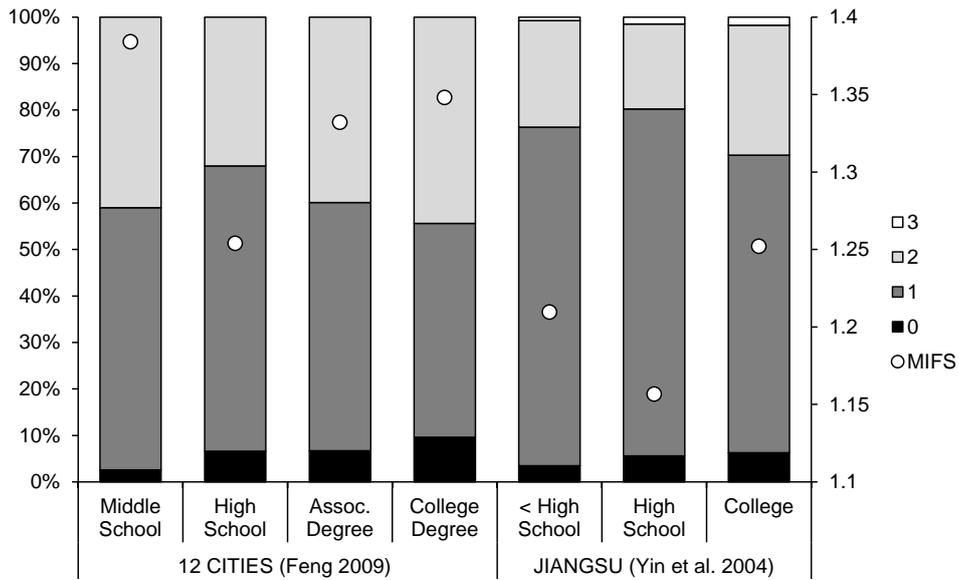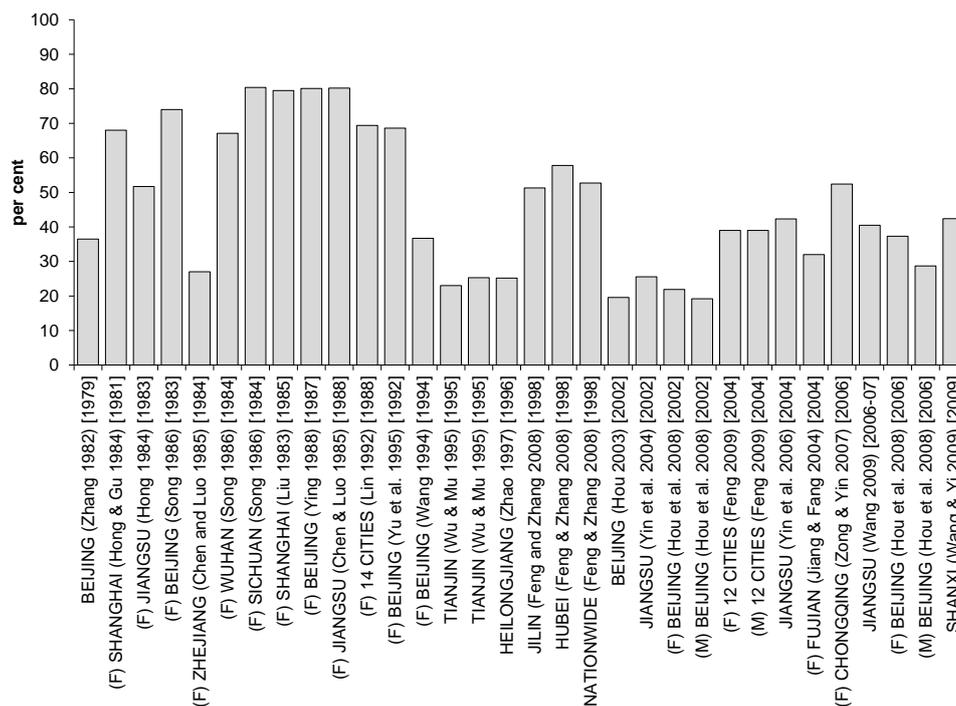
Sources: Feng 2009; Yin 2004

2.3. Validating the data: politically incorrect answers

In Section 1.8 we considered the critical question of reliability. A further reason why we consigned our study here to urban studies was that respondents in these settings would be almost certainly bound by a restriction to have only one child – although, as noted earlier, some couples in some provinces would be eligible to apply for a license to have a second child, but only a relative few actualise this.

Figure 6 presents the percentage of respondents in each survey who give what might be termed a 'politically incorrect' answer to the question regarding fertility preferences. For our purposes, we have considered 'politically incorrect' to mean stating a preference for two or more children. While stating a preference to remain childless may be 'culturally' frowned upon in some settings it is not, of course, proscribed or even discouraged under current family planning legislation.

Figure 6: Percentage of respondents giving 'politically incorrect' answer (defined as 2 or more children) in response to fertility preference survey question, urban surveys

Sources: Zhang 1982; Hong 1984; Sanyang 1986; Chen and Luo 1985b; Liu 1983; Sun 1988; Lin 1992; Yu 1995; Wang 1994; Wang and Yi 2009; Hou 2003; Hou and Ma 2008; Wang 2009; Zong and Yin 2007; Jiang and Fang 2007b; Yin 2006; Feng 2009; Hou, Ma, and Huang 2008; Feng and Zhang 2008; Zhao 1997; Wu and Mu 1995

As a broad corollary of Figure 4, the number of people who state a preference for two or more children decreases over the period 1980-2009. We might assume that if respondents felt pressurised to give a politically correct, normative answer which affirmed their belief in the efficacy or justification of the 'one-child policy', then in the absence of any major policy change or shift in public opinion we might expect the pattern of politically correct answers to stay relatively constant. Indeed, we might suggest that in the era immediately after the implementation of the policy in the early 1980s, there may have been a greater propensity to state the politically correct answer especially in the era of more rapid population growth.

It is not possible, of course, to discount the possibility that responses given to surveys regarding fertility preferences are unduly influenced by giving the 'politically correct' answer – especially in the context of a state which wields a significant amount of power regarding patronage. A further factor which can affect the likelihood of response bias is the fact that a large number of surveys are actually performed by local branches of the (now defunct) Population and Family Planning Commissions, i.e. the very organs who (frequently zealously) police the enforcement of family planning restrictions. As mentioned above, other surveys have found that anonymous responses do, indeed, elicit higher stated fertility preference (J.

Wang 1990; Hermalin and Liu 1990). However, without such comparative surveys being performed it is very difficult to tease out the extent to which this is seriously skewing the findings.

To conclude, therefore, we present a handful of reasons which might indicate that while we should be careful to recognise the potential impact of politically correct response bias, these data should not be written off entirely. Firstly, the percentage of respondents is relatively high, and decreases over the course of the period under observation, broadly tracking the general downward trend in fertility. Secondly, a number of qualitative studies for urban China have identified a growing acceptance of smaller family sizes (e.g. Nie, 2005). Thirdly, MIFS similar to those reported for China have been identified for Hong Kong and Taiwan (Basten 2013) – both settings with no history of proscriptive family planning regimes. If we are to see the process of fertility decline in a similar vein to that observed in those settings – namely primarily driven by economic and social development rather than the explicit overriding mechanism of the 'one-child policy', then we should perhaps not be surprised to see similarly low fertility preferences.

3. Discussion and conclusion

3.1. Limitations

We have been very clear and open about the rationale of this project and the clear and obvious limitations to it. Firstly, we have examined fertility *ideals* rather than the perhaps more robust measurement of fertility *intentions* as a means of eliciting information regarding fertility preferences. In the context of the Chinese family planning restrictions, however, fertility *intentions* are likely to be highly restricted for the vast majority of urban couples. Again, in this paper we have tried to identify general attitudes towards fertility preferences as a bellwether of idealised family size.

A second limitation is that the meta-review is made up of a hotch-potch of studies which utilize different (sometimes sub-optimal) methodologies to study different groups of people at different stages in their life course. In this vein, our overview is very much in the same vein as Whyte and Gu's 1987 study which sought to piece together similarly disparate studies in a brave attempt to give some overall picture of fertility preferences in contemporary China. A related issue concerns the reporting of findings in many Chinese language academic papers. Not one of the studies examined contained a regression analysis – surely a useful implementation of attempting to understand the predictors of different fertility preferences.

There are two clear implications here. Firstly, the study of fertility preferences in China needs to become more statistically sophisticated as a matter of urgency. The quality of reporting in many Chinese language journals is sub-optimal and does not allow for sufficient differentiation between potentially important predictors. The second is that a more open culture of data sharing would permit a broader array of scholars to perform more robust statistical analysis and, critically, to build upon existing studies to develop surveys which could be comparative with one another, perhaps through shared methodologies, question sets and sampling frameworks.

A final limitation relates to gender preferences. In the context of highly skewed sex ratios, preference for different gendered make-ups of children sets is likely to be highly influential (Basten et al. 2013). This can be released in a number of ways: either through the explicit desire of one boy; or through a mix of boy and girl (leading to a statement of a higher fertility preference) or, critically to return to our discussion in the 'Background' section, regarding the condition of the respondent as they progress through the life course. In particular, we know from studies of both China and elsewhere in Asia that parity and sex composition of children already born has a strong influence on sex ratios of births at a given parity and, hence, the application of sex-selective technology (Basten et al. 2013; Das Gupta 2005; Poston, Conde, and DeSalvo 2011). From the 1990 and 2000 Chinese censuses, we know that the sex ratio at parity two, for example, ranges from 107.5 where the first child is a boy through to 190.0 where the first child is a girl. This demonstrates the clear importance of maximising the opportunity to secure a son at the point of second birth. Similar evidence can be found for Mainland Chinese parents giving birth in Hong Kong (Basten and Verropoulou 2013; Basten and Verropoulou 2012). We know that parity and sex composition of children already born has a significant impact upon shaping both fertility intentions in rural China (Basten et al. 2013) as well as among women in both urban and rural Taiwan (Basten 2013). On the other hand, a recent limited analysis of a number of studies which analyse the fertility preferences of Chinese urban dwelling only-child couples actually suggests that gendered preferences are, in fact, relatively limited (Qi 2013). However, evidence concerning this is sketchy and often contradictory in different settings (e.g (Ma 2012; *cf.* Zong and Yin 2007). Clearly, further research is needed into this, combined with a much greater degree of statistical sophistication in analysis to understand the possible predictors of such gender preference. This would contribute not only to the fertility preference literature, but also to our understanding of the extremely high sex ratios present in contemporary China which are likely to bring significant social

problems in the coming decades in terms of the marriage squeeze and so-called 'bare branches', or males who are unable to marry (e.g. Basten 2012; Trent and South 2011; Guilmoto 2012).

3.2. Has (urban) China fallen into the Low Fertility Trap?

If we take the evidence presented here at face value, fertility preferences in urban China are well below-replacement rates. In this regard, the findings of our meta-review squares with both nationally representative surveys (e.g. Zhang 2004) as well as robust, in-depth local studies which have been accepted by the scholarly community which report fertility preferences of (well) below replacement, especially for urban settings (e.g. Zheng et al. 2009). The Mean Ideal Family Size reported in the surveys we have analysed here have generally decline over the period 1980 to 2000. In the 2000s, the MIFS reported in 13 studies for of the preferences of men, women and couples all fell within a boundary of 1.0 to 1.6, with a majority falling between 1.1 and 1.4. While this is certainly above the *period* Total Fertility Rates [pTFR] for many urban Chinese settings (for example, the pTFR of Beijing and Shanghai are regularly reported to be well below 1.0, see (Basten, Lutz, and Scherbov 2013). However, the relationship to the *cohort* fertility rates is more important. Two recent influential studies estimated the mean completed fertility for women born in the 1970s to be around 1.6-1.7 (Morgan, Guo, and Hayford 2009; Myrskylä, Goldstein, and Cheng 2012). However, as this figure represents *all* of China, the cohort fertility rates for *urban* China are likely to be significantly lower (Yi and Vaupel 1989). For example, in 1989 the mean number of births of women aged 35-39 was just 1.23 in Beijing and 1.08 in Shanghai (including those living in suburban counties) (Z. Zhao 2001).[3] Combined with higher rates of childlessness, and the more rigid family planning restrictions, therefore, it is almost certain that cohort fertility in *urban* China is significantly lower than the figures reported by Myrskylä, Goldstein, and Cheng (2012) and Morgan, Guo, and Hayford (2009). This therefore suggests that childbearing preferences in urban China – at least as measured by the MIFS – could now be convergent with cohort fertility rates. However, this claim can only be effectively tested by more in-depth analysis of shifting cohort trends in fertility preferences and their relationship to actualized fertility at both the national and

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[3] As Zhao remarks, 'The up-to-date figures, if available, are most likely to be even lower. These could easily be the
lowest cohort fertility ever-recorded in human history' (Z. Zhao 2001, 7)

local level through improved access to existing data and the commission of new surveys (see 'Limitations' below). We also need to critically bear in mind the issue of politically correct responses mentioned above as well as all of the limitations of this study discussed above.

If, however, these were to be externally validated in some other way, it might suggest that urban China may, indeed, have fallen into the 'Low Fertility Trap' where fertility preferences have fallen to a level where they have met cohort fertility rates. In many ways, this is hardly surprising. China's family planning system has extolled the virtues of fertility limitation in general, and the benefits of the one-child family to urban dwellers for the past forty years. Indeed, this promotion has been backed up by a proscriptive legislative system enforced by a highly pervasive network of (frequently zealous) cadres functioning in a repressive state characterised by patronage. However, it appears likely that this *legislative* force has serve to *reinforce* prevailing forces which have been shown to shape sub-replacement fertility intentions (and very low fertility) both in China and across East Asia. These include rapid economic development and social change; high costs of living and expected investment in children and an 'incomplete gender revolution' of roles where traditional expectations of females in the private sphere have not changed to keep pace with new realities in the public sphere (McDonald 2009; Esping-Andersen 2009). These elements have been seen across low fertility Pacific Asia, and can be shown to be reflected in sub-replacement fertility preferences.

Shifting family dynamics are also playing a key role, and could even serve to further contribute to a negative feedback effect not adequately recognized in the Low Fertility Trap Hypothesis (Lutz, Skirbekk, and Testa 2006). In particular, the role of the so-called '4-2-1 Problem', where in a society with strong filial piety and the absence of adequate state-provided care of the elderly, a couple made of up only children (2) are in the position of caring/providing for both sets of their parents (4) and their one child (1) (see, for example, Luo 2012; Cheung and Kwan 2012). In this context of high pressure, narrow kinship lines and increasing levels of economic burden upon Chinese adults (in the presence of increasing alternative consumption possibilities *a la* Becker (1960), both low fertility and matching levels of preferences become a rational response; and increasing the level of burden can be difficult to justify. This issue of family roles and responsibilities has been identified as being a key issue in other low fertility settings in the region, contributing to further gendered tensions regarding partnership formation and childbearing (Song, Chang, and Sylvian 2013; Chang 2011).

To answer the question posed in the title of this section adequately, however, more data need to be collected and analysed. As well as the need to perform more robust statistical analysis, it is also crucial to adopt more of a 'systems' approach which includes a more sophisticated and nuanced understanding of the fertility behavior and preferences of urban and rural dwellers as well as the 200-million plus strong 'floating population' which can take account of different family planning restrictions as well as the macro- and micro-level impact of a variety of socioeconomic variables. This will only be achieved by greater collaboration between scholars (including increased data sharing); capacity building of demographic and statistical techniques among social scientists in China; the further development of nationally representative surveys and, finally, through the *validation* of survey findings through mixed-method, qualitative research.[4]

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[4] The new *Chinese Family Panel Study* is such an example of new surveys which will prove invaluable to understanding fertility preferences and behavior in China.

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