A Demographer’s Demographer: Arvind Zodgekar

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Abstract
For 35 years between 1973 and 2007 Dr Arvind Zodgekar taught demography and research methods within the Sociology and Social Policy Programme at Victoria University of Wellington. During that time he imbued thousands of students and dozens of staff with the excitement and relevance of demography. Much of the understanding and appreciation of population matters that is present throughout New Zealand in local and national government, and in private enterprise, results from his teaching. Others learned about demography through the radio, television and the print media. Arvind’s clarity and rigour is matched only by his modesty and genuine concern for others and their understanding. Through a review of Arvind’s research on populations in India, the United Kingdom, the United States of America, Canada, Australia and New Zealand we begin to appreciate the extensive coverage he gave to the key aspects of demography, fertility and mortality, and most recently to immigration. Entirely reliable, meticulous and relevant, Arvind’s writing laid down a mantle of scholarship upon which future generations can build with confidence. It now remains for the New Zealand university system to recognise the value of appointing mathematically trained demographers so that we can continue to understand ourselves through our population.

One of the last of the formally trained demographers of his generation retired from the New Zealand university system in July 2007 after a long and fruitful career at Victoria University of Wellington (VUW). For 35 years Dr Arvind Zodgekar taught demography and research methods within the Sociology and Social Policy programme: Population Studies at 200 level and Demography at 300 level, as well as Honours. He also co-taught a 300 level Sociology Research Methods course in which students had the opportunity to undertake a supervised research

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Many students have commented on the value of this course to them in their later careers.

It was not only students who benefited from Arvind’s expertise. During his time at VUW he worked with a range of social scientists, many of whom focused on qualitative data. He was especially valued for the contribution he made to their research and in demonstrating how a demographic dimension could strengthen and develop their arguments. In his role as resident demographer Arvind was always very generous with the advice and support to colleagues.

Arvind also served as a member of the Executive Council of the New Zealand Demographic Society since its inception in 1975 (now the Population Association of New Zealand, or PANZ) and was President for three years between 1997 and 2000. For the past five years Arvind has been a co-editor of the New Zealand Population Review. In 2006 he was made a Life Member of PANZ in recognition of his contribution to the research, teaching and promotion of demography in New Zealand.

Arvind’s expertise continues to be drawn on frequently by the news media and as a result, he has played a major role in disseminating and critically commenting on issues related to population. He appeared on a number of current affairs radio programmes including Insight and Morning Report, and has been visible in the print media, on television, in fronting an episode of Asia Downunder as well as commenting on demographic events. Throughout his career the Department of Statistics Demography Unit, Census Division and Social Welfare as well as the Population Monitoring Group have been frequent users of his expertise.

Arvind was also associated with making two major submissions on New Zealand population policy in the 1970s. The first was through the inter-departmental committee on population questions in the mid 1970s, on behalf of the New Zealand Demographic Society. The second was to the Royal Commission of Inquiry into Contraception, Sterilization and Abortion in New Zealand, again through the Society.

Against the background of these contributions the aim of this paper is to recall the contribution Arvind has made through his research. I begin by tracing his early education in India through to his Masters, PhD and post-doctoral work in the United States of America and then to his appointment to VUW.
His research began with the population of India developed through his post-graduate work on internal migration in the U.S.A. and extended into the relationship between demographics and long swings of growth in Australia. Notwithstanding the impact of this earlier work, the bulk of Arvind’s research has been on New Zealand and it is from this body of work that I trace his additions to our understanding of changes in fertility and mortality culminating in his sequence of papers on New Zealand’s population structure. Much of Arvind’s more recent work focused on immigration, an interest that began with his enquiry into the motivations for British emigration to New Zealand. He then undertook studies of Indian settlement in New Zealand and has most recently documented the multicultural complex of current immigration patterns and the on-going issues of adjustment to a new land. Throughout this work we see demographic principles, processes and patterns outlined with unusual clarity and relevance. It is through his writing that we appreciate that Arvind was not only a very effective teacher but an excellent communicator of new and important trends within population itself.

Educational Background

Born and educated in India, Arvind graduated in 1962 with a BSc in statistics and mathematics from one of India’s premier universities, the University of Poona (now the University of Pune) in Western Maharashtra, India. He gained an MSc in Statistics in 1964 and then moved to what became the International Institute for Population Sciences (IIPS) in Mumbai which served as the regional centre for the teaching, training and population research for the ESCAP region. There Arvind completed a Diploma in Demography in 1967, working firstly as a Research Assistant and then as a Research Officer.

The quality of Arvind’s work was such that he was accepted for a Masters in Demography at the University of Pennsylvania, USA. In 1969 he completed his masters by course work and was subsequently invited to extend his research into a PhD. The thesis he presented carried the title *Interrelation in time series of demographic and economic variables: Australia and Canada*. He graduated with a doctorate in demography in 1972. His supervisor was the well known population specialist Professor Dorothy Thomas, who was also Research Director and Co-director of the Population Studies Centre at the University of Pennsylvania.
While in Pennsylvania, Arvind served as a Summer Research Assistant to Professor Thomas and then as a Research Officer for the International Bank for Reconstruction and Development (World Bank) in Washington, D.C. in 1972. In January of 1973 he took up a lecturing position with the Department of Sociology at VUW.

Research

Arvind’s first paper, ‘Increasing female age of marriage in India and its impact on the first birth interval; an empirical analysis’ was written in 1969 with a senior colleague while he was at the Population Studies Centre (Chidambaram & Zodgekar, 1969). It was published as the first paper in the first volume of the International Union for the Scientific Study of Population (IUSSP) series.

In the 1960s, India had the lowest mean age of marriage in the world and there was lobbying for an increase in the legal age of female marriage from 16 to 20 years. The increasing age of marriage was of special interest because of the impact of marital age on the birth rate. Arvind’s contribution was to point out that, although ages of effective marriage were rising throughout India, the length of the first birth interval was actually falling and hence so was the age of the mother at first birth:

It has been found that in the Indian setting when consummation takes place at young ages, say at 17 or below, the length of the first birth interval is negatively correlated with the age at consummation. Therefore "an increase of two or three years in the present age at effective marriage among the Indian women cannot be expected to delay the onset of child bearing and thereby reduce the actual reproductive period". Not only was there no evidence to indicate any increase in the age at first birth, "but the possibility of even a reduction in the age at first birth or of quickening the onset of child bearing cannot be ruled out in the present Indian setting. (Chidambaram & Zodgekar, 1969: C2, 2.5).

It was not until Arvind was well into his time in New Zealand that he published again on demographic change in India. In 1996 the Asia-Pacific Journal carried his paper ‘Family welfare programme and population stabilisation in India’ (Zodgekar, 1996). Even though India was the first independent country in the world to adopt a policy of reducing population growth through a government sponsored national family planning programme started in 1952, the pace of fertility decline remained relatively
slow and many were concerned, as they still are, that India might replace
China as the world’s most populous country before the middle of this century.

Arvind argued that the image of the family planning programme needed
to change, from being solely a birth control programme to one which
improved the quality of people’s life (achieved through improvements in
literacy, status of women, infant mortality and a reduction in the level of
poverty). Instead of being a government programme, birth control needed
to be seen as a personal programme: a transfer of responsibility from the
State to the individual family which, in turn, required the acceptance of the
small family norm. This required that socio-economic development reach a
threshold beyond which reductions in family size would be non-threatening.

At the turn of the new century Arvind looked once again for progress in
India’s fertility decline (Zodgekar, 2001). The country was still
predominantly rural, poverty levels remained high and progress in
addressing gender imbalances, in schooling in particular, was slow. Like
many demographers at the time, Arvind foresaw the particular need for
investment in the health and education of women. The mere availability of
birth control facilities was not enough, nor was it sufficient to simply
improve women’s well-being. New incentives for marrying after a certain
age, delaying a first child until the woman was 21, adopting contraception
after the birth of the second child, as well as the provision of more crèches
and child care facilities, were necessary to empower women. The
considerable geographic diversity of India also had to be recognised for
infant and maternal mortality could vary up to eight times across the states.

Although Arvind retained an interest in population issues in India, with
his domicile in the West it was inevitable that most of his research would
focus on demographic trends outside the sub-continent, beginning with the
USA, then Australia and New Zealand.

**USA: internal migration**

Arvind published two papers from his base at the Population Studies Centre
in Philadelphia. The first, with Arvind as the lead author, was a paper on
internal migration within the USA published in *Demography* (Zodgekar &
Seetharam, 1972). Arvind is still the only New Zealand based demographer
to have published in that premier journal. The paper entitled ‘Interdivisional
migration differentials by education for groups of selected SMSA’s United States 1960’ used data supplied by Dorothy Thomas under a National Science Foundation grant.

That paper remains one of the important contributions to our understanding of the relationship between education and internal migration, a topic which is receiving particular attention today. Arvind began with the suggestion that migration was most likely to occur at higher levels of education, noting Lee’s argument that migration appears J, U or reverse J shaped over the education domain. Arvind draws attention to the importance of distinguishing between the education level of migrants and non-migrants at the origin (origin differentials) as opposed to the destination (destination differentials). It was especially important, he argued, that demographers address the principles of selectivity at both the place of origin and destination (p. 684). Focusing on ‘destination differentials’ and using four colour by sex groups from the 1960 US Census, Arvind showed how educational differentials were manifest among different types of migrants between 49 Standard Metropolitan Statistical Areas (SMSAs). He confirmed the presence of J, U and reverse J shapes over all the groups with departures being accounted for in terms of the proportion of foreign-born whites, the geography of origin and destination and the distribution of educational attainment.

**Australia: long swings**

The last paper submitted before Arvind came to New Zealand was published, appropriately enough, in Victoria University’s journal, known then as *Pacific Viewpoint* (Zodgekar, 1974). It was entitled ‘Evidence of long swings in the growth of Australian population and related economic variables, 1861-1965’. Originating in his doctoral thesis, this paper had its origins in the work that Dorothy Thomas and Nobel Prize winner Simon Kuznets undertook a decade earlier in the USA and Sweden. The focus of Arvind’s attention was on whether the waves of immigration to Australia were associated with the host country’s changing economic conditions. That the turning points of long swings in output growth typically preceded those in the rate of net immigration suggested that immigration was indeed responding to changes in conditions in Australia. This was particularly the case when conditions were represented by the unemployment rate, the ease of gaining employment in the host country being a primary inducement to
immigration. The same series in the country of origin, the UK, apparently played little role. Instead, the demand for labour in Australia and the country’s rate of economic development accounted for about a third of the variance in the (moving age) immigration rate.

A second question out of this PhD research concerned the presence of long swings in fertility and whether they too could be explained by similar movements in the Australian Gross Domestic Product (GDP). The evidence available from 1861 through to 1961 was insufficient to link rising fertility with rising domestic product, but Arvind was nevertheless able to demonstrate the coexistence of long swings in immigration and fertility (as well as aggregate output and employment conditions).

When Arvind moved to New Zealand in 1973 there were many opportunities for research. The one that captured the imagination of several demographers at the time was the question of fertility change.

**New Zealand: Fertility**

Arvind’s paper published in the *Journal of Biosocial Science* and titled ‘Maori fertility in a period of transition’ was to be his only paper specifically on Maori in New Zealand (Zodgekar, 1975). In this work he drew attention to the fact that over the decade 1961-1972, the Maori crude birth rate had declined by nearly 28 percent with only a very small part attributable to changes in the age-sex and marital status composition. He showed how this fertility decline first became evident among older Maori women and was only later adopted by younger women. Rather than reflecting inter-marriage between Pakeha and Maori as some suggested, it was rapid urbanisation and a rapidly reducing level of infant mortality which were the main reasons for the fertility decline, as well as an increase in all levels of education associated with the widespread adoption of contraception.

The message of Arvind’s companion piece in the same journal focused on the fertility transition of non-Maori in New Zealand (Zodgekar, 1980b). Covering a much longer time span, 1860 to the mid-1970s, Arvind showed how the more extended fertility transition took place in four distinct stages: the first was the postponement of marriage to later ages between 1860-1880; the second phase was marked by an increasing control over fertility within marriage and postponement of marriage. This phase, which continued into the 1910s, resulted in a more marked decline in family size than had taken
place in most other urban societies. Here the British influence appeared so pervasive that the New Zealand fertility declines took place at a similar time rather than at a similar stage in economic development. The third stage spanned the period between the World Wars until the 1950s during which fertility control within marriage became possible and widespread. The fourth stage began in the 1960s where the new type of contraceptive combined with many other factors to allow greater control over fertility. While technically the oral contraceptive was important its impact was due in large part to the social and attitudinal changes associated with the ‘new roles of women’.

The only other paper Arvind was to write specifically on fertility change in New Zealand was his first contribution to this journal in 1986, which addressed the fertility of the baby boom generation (Zodgekar & McClellan, 1986). What fascinated Arvind in this instance was the deviation of the baby boomers’ own fertility patterns from that of their parents, a departure which he recognized “had a profound influence upon the structure, organization, values and policy making within New Zealand society – an influence which will continue to be felt well into the next century” (p. 205). Instead of this ‘giant cohort of baby boom women’ producing yet another baby boom Arvind saw a marked divergence in reproductive behaviour in the space of only one generation:

The baby boom cohort did not have their children as quickly as their parents. They postponed both marriage and family production, pushing births back in timing and deepening the trough of the ‘baby bust’. These timing factors, the delay in marriage and the delay in childbearing are the crucial factors in understanding the fertility behavior of the baby boom generation. (p. 208).

What struck Arvind was the nature and speed of the change in fertility, as well as the coincidence in comparison countries, including Australia and the United States. Drawing on his awareness of timing from his earlier Indian work, he noted how in the New Zealand context, “the timing of first births is crucial for any fertility analysis and projection” (p. 212). With little data to go on even in the mid 1980s, Arvind joined several other commentators in speculating as to the reasons: education raised the returns to work, and labour force participation became a major source of additional income for households with unprecedented life style aspirations. “The
women of the baby boom generation”, he noted, “were the first female cohort to come of age with aspirations that usually extended beyond that of motherhood and domesticity” (p. 212).

**Mortality**

While changes in mortality in New Zealand were nowhere near as spectacular as those involving fertility, there were characteristics of mortality which needed highlighting for an increasingly demographically literate readership. In the late 1970s Arvind was asked to write the chapter on mortality in Neville and O’Neill’s well known volume *The population of New Zealand: an interdisciplinary perspective* (Zodgekar, 1979). His argument begins with an observation which is also a puzzle: by the mid 1970s, New Zealand had reached a point of mortality stagnation, having experienced a continuous decline in the record since the early 1900s when the European population was the first in the world to record an expectation of life at birth of more than 60 years (p. 92). The record itself shows periods of decline alternating with periods of stagnation of which the period from the 1960s through to his time of writing was the latest.

The stagnation was due solely to the experience of men. From having a very similar mortality rate to females in the early 1900s, the differential arose because there had been greater progress in reducing the death rate among females (p. 93). Since 1921 male mortality had been higher than female mortality at every age and the difference was increasing. The most dramatic increase in the sex differential was in the 15-24 age group where the male death rate was nearly three times higher than the female death rate (p. 98).

The same chapter also contained observations on racial differentials, the mortality rate at every age from 25 to 64 years being nearly two and a half times higher for Maori than for non-Maori (p. 103). However, the growing youthfulness of the Maori population helped disguise a slowing mortality decline and partly for this reason, “the large racial differential in mortality has failed to receive the full degree of attention it deserves” (p. 103). Arvind’s other observation concerned the ‘health gradient’ - the inverse relationship between occupational class and mortality - an issue which he foresaw needed much closer research (p. 106).
Arvind’s chapter on mortality ends with the expectation that low mortality rates can be expected to fall even further given the much lower rates prevailing in Sweden and other Scandinavian countries. However, he cautioned that, “any substantial reduction in mortality rates in New Zealand beyond [their then current rates] will depend on the lowering of the death rates for degenerative diseases”, heart disease and cancers making up half of all causes of death in the mid 1970s (p. 106).

Arvind revisited trends in New Zealand’s mortality rate in two subsequent papers written a decade apart, both of which reflected his increasing interest in demographic ageing. The first addressed the “Social impact of recent and prospective mortality decline among older New Zealanders” published in the *Asia-Pacific Population Journal* (Zodgekar, 1994) and the second appeared in Chapter 5 of the Davis and Dew book on *Health and Society in Aotearoa* published by Oxford University Press, entitled ‘The ‘greying’ of Aotearoa New Zealand: policy implications of demographic change and structural ageing’ (Zodgekar, 2005b). The central message of these papers was the widespread intergenerational implications of population ageing and the need to plan in order to cope with the increasing demands caring for the elderly would place on both the formal and informal systems.

**The ‘Greying of Aotearoa’**

The arrival of a large baby boom cohort into their 60s required the dissemination of the demographic fundamentals of the ageing process. Arvind reminded us that ageing is built into, and is therefore a natural outcome of the demographic transition, and that the passing of a large cohort only adds magnitude to the phenomenon. With a foresight that is characteristic of his discipline, Arvind was well aware of our entering ‘a critical moment in the demographic evolution of New Zealand’ (Zodgekar, 2005b):

A major part of the process is the decline in rates of death (or mortality), which has greatly increased the chances both of surviving into old age and of living longer once one reaches old age. But changes in fertility have also played their part, particularly through the post-Second World War ‘baby boom’ and the subsequent rapid decline in fertility. Fertility change has been a major factor in shaping the course of structural ageing in New Zealand. Older populations will also become more diverse with the increasing proportions of Maori, Pacific, and Asian peoples reaching and
passing 65, both as a result of increasing life expectancy and larger birth cohorts reaching old age. (p. 69)

In contrast to the mortality trends he wrote about earlier, decline in mortality had now spread across all age groups due to “efficient control of infections and parasitic diseases”, leaving accidents and degenerative diseases as the main causes of death (Zodgekar, 1979).

Arvind’s particular concern was over who would care for older people, both within institutions and the community (Zodgekar, 2000), a concern which carried important “consequences for hospital provision, community care, and family support in old age” (Zodgekar, 2005b, p. 70). The social impact of mortality can be understood, he stressed, only once the numbers moving into these ages is appreciated. Assuming the values of the late 90s life tables hold, “almost 64 percent of men born in 2031 and 75 percent of women should live to age 80” (p. 72). Most care of the elderly is undertaken by families and therefore the social implications stem from the uneven generational size. The distribution of population within the older age groups is also going to change with the proportion over 80 contributing 23 percent of the population in 2031. In a telling statistic, “over the period 1996-2031 the number of those aged 80 and older is likely to increase from 95,700 to 314,200 which will have significant implications for the financing, organization and utilization of health care resources” (p. 74).

Not only will there be more old people in the society but a higher proportion of them will be women. The implications here are complicated by the accompanying shift of support within the family with grandparents, parents and children now more likely to be living at the same time. Falls in mortality and consequential life expectancy was producing the two-generation geriatric family – children reaching old age while their parents are still alive (p. 76). Familial aged dependency ratios were rising rapidly as a result, a situation which becomes more complicated as more and more women from this care giving age group (40-59) enter paid employment reducing the pool of women available to undertake the care-giving role (p. 77).

Although declining mortality was expected to result in an increase in the number of generations in the family, of greater public policy concern was the long-run decline in fertility resulting in a smaller number of living children and grand children to care for the elderly population (p.78).
Families now have more living generations but successive generations will be smaller in size. “Therefore the potential of the family to act as a support network for its older members is diminished, a feature compounded by a greater disability burden with age” (p. 81). Pressure on care will therefore grow as emphasis shifts from institutionalised to community care, implying the need for the state to transfer resources.

With older age comes disability and here Arvind drew on the 2001 New Zealand Disability Survey to show that well over half a million (527,430) of those older than 65 were likely to carry some form of disability in the years 2031. His calculation led to an, “expected increase of nearly 186 percent in the number of beds required in the public and private hospitals for geriatric care” (p. 79). Clearly, the reductions in mobility rates in New Zealand during the twentieth century have not been accompanied by equivalent improvements in morbidity. The debate, he argued, should therefore centre on the possibility that longer life might be accompanied by prolonged periods of chronic disease, illness, and disability and for such developments to have a potential impact on future demand for health services (p 80).

**New Zealand’s Population Structure**

Arvind tackled the overall structure of the New Zealand population in two papers a decade apart. The first was a chapter in Spoonley, Pearson and Shirley’s book *New Zealand society: a sociological perspective* (Zodgekar, 1990b). The second was for the joint special issue of the *Journal of Population Research and New Zealand Population Review* in 2002 (Zodgekar & Khawaja, 2002). In each case he drew on the most recent figures to update his previous discussions on population growth, age structure and fertility trends, including an update on Maori fertility transition and immigration.

The two main changes in the post-World War II years through to the late 1980s were the dramatic fluctuations in international migration and the significant change in the level of fertility. These resulted in significant changes in the relative importance of natural increase and net external migration as components of population change. A decade later and the same two points emerged again, but this time there was greater emphasis on the growing cultural diversity, diversity of household structures and a slowly ageing population (Zodgekar & Khawaja, 2002).
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Two issues were given special attention against this background of compositional change and increasing diversity: the demographics of labour force participation and tertiary education. The first was addressed in the early 1980s for the ESCAP volume, Population of New Zealand (Zodgekar, 1985). Arvind’s extensive coverage of the demographics behind the composition of the New Zealand labour force still renders this one of the most useful introductions to the demography of the labour supply in New Zealand, foreshadowing as it does many of the issues such as ageing of the work force and the implications of younger populations for the growth of the labour supply of Maori.

In the case of tertiary education Arvind adopted a cohort approach (Zodgekar, 2002). In a paper that was as timely as it was influential, he focused on the implications of major demographic changes for enrolments in tertiary education noting that, “after a continuous rise during the 1980s and early 1990s, the enrolments in tertiary institutions have either slowed down or are beginning to experience a decline” (p. 143). Both changing demographics and increasing financial cost were responsible. While demographic factors will continue to play a role due to an expected decline in the future birth rate and the exit of the relatively larger size cohorts from the core tertiary age groups (15-39), Arvind noted how future growth in tertiary education and particularly in student enrolments would most likely be driven by non-demographic factors, notably changes in access requirements and government funding (p. 144).

Immigration

Interestingly, it took Arvind a good 15 years after moving to New Zealand as an immigrant to start writing about it. Personal reflections are rarely part of the academic discourse but personal experience is a profound motivator for inquiry and it is no accident that some of our best writing on immigration to New Zealand has been undertaken by those who came to New Zealand as adults.

Arvind’s 1997 text remains a remarkably uncomplicated introduction to immigration into New Zealand over the post Second World War period (Zodgekar, 1997). What is significant in terms of his own intellectual journey is that the objective of this study was not demography per se. Rather it was about adaptation and economic integration, questions which are central to immigrants themselves. More poignantly, this is a study which
documents, in Arvind’s typically understated way, the less than equal returns to human capital experienced by recent immigrants from Asia and the Pacific.

Based on tabulations from the 1986 and 1991 Censuses of Population and Dwellings, Arvind’s research on immigration was undertaken against the background of economic liberalisation in the 1980s and the accompanying review of immigration policy. The introduction of the points system favouring education and specific skills in 1991 followed the removal of the racially selective White New Zealand policy in 1986. The subsequent influence on the mix of immigrants was considerable, for while the proportion of foreign-born in New Zealand remained between 15 and 17 percent, its composition changed markedly (Zodgekar, 1997, p. 60).

With a higher proportion of men and women of working age with university and post-graduate education holding professional, technical and managerial posts, the key research question was the extent to which immigrants were able to obtain returns comparable to those received by the New Zealand born. They were not. With the available statistical controls in place Arvind wrote how “The disparities in average income between the various immigrant groups clearly showed that the immigrants from traditional sources (the U.K., other European countries and USA/Canada) have a much greater higher average income than immigrants from Pacific Islands and Asia” (p. 61). The disparities for women were even greater.

In a companion paper published in 1998 Arvind reviewed the dominant models on the economic differences and adaption of immigrants. Conducted before access to unit record data became available to researchers, his analysis was based on a specially prepared set of cross tabulations. With relevant statistical controls in place he was able to show not only that immigrants received lower returns to education than the native New Zealand population but that there was a difference in treatment of migrants from traditional and non-traditional sources. Based on the 1991 Census results:

…it was clear from the distribution of socio-economic characteristics that immigrants from the traditional source countries (UK, Canada, USA and Australia) did not have any advantage over immigrants from the non-traditional sources. But they did command the migratory elite status and command their hierarchy within each occupational status due to ethnic stratification. Thus the labour market experiences of immigrants from the
traditional sources lend support to the Colonial Domination Model (Zodgekar, 1998, p. 38).

In spite of their higher level of education Asian immigrants earned far less than New Zealand-born males. This may have been due, Arvind noted charitably, to the possible problems in obtaining recognition for educational skills/qualifications and work experience acquired elsewhere”. Whether or not they will improve their relative economic position as their length of residence in New Zealand increases remained to be seen (Zodgekar, 1998, p. 39).

Several of these same concerns were foreshadowed in Arvind’s earlier paper ‘Immigrants in the 1981 Census’ (Zodgekar, 1986). In a wonderfully guarded statement he wrote, “If the collection and availability of census data assist in the development of harmonious inter-group relations by alerting the host population to the contributions and problems of immigrants then New Zealanders could fairly be claimed to be well informed” (p. 55). He went on to make the case for collecting information on the use of English and other languages, an addition which would “add a valuable dimension to our perception of New Zealand as a multicultural society”:

A good case could also be made for data on the birthplaces of the parents and grandparents of New Zealand residents. In this case the descendents of immigrants could be identified, inter-generational comparison, mobility, language retention and intermarriage could conceivably be explored. Once again our perception of the ethnic dimension to our society would be significantly enhanced (p. 56).

That data on language spoken at home and birth place are now collected in the quinquennial census is indicative that some New Zealanders have listened.

**The British immigration experience**

Although Arvind is most immediately referred to as a demographer, his appointment was in sociology and, as noted above, he studied for his doctorate under one of the USA’s most prominent sociologists. It is not surprising therefore, that sociological questions on the fringes of demography often caught Arvind’s attention. One of these concerned the way in which potential immigrants make decisions to leave a country and
travel half way round the world to a country much smaller in population than the one they left. It was this question that resulted in a series of papers on British emigrants, for as he noted "Despite the role emigration from Britain to New Zealand has played in this country’s history and demographic development, comparatively very little research has been done on this topic" (Zodgekar, 1990a, p. 427).

Arvind was interested in the decision to leave, information received and the information acted on in making the move. His empirical research into this issue was based on responses to 332 questionnaires returned from 700 questionnaires mailed to British applicants with their immigration acceptance papers over six months from March 1983. The Immigration Division of the Department of Labour and New Zealand High Commission in London offered administrative support. Emigrants were asked questions about their knowledge of New Zealand, sources of information and the influence these sources had on their decision to emigrate. There were certain characteristic features of the British emigration to New Zealand in the early 1980s, most notably that three quarters had jobs to go to, a feature which substantially reduced their risk (p. 431). Most males expected greater job satisfaction than they were currently receiving and all except those in the highest paying jobs expected to improve their income. Most were families and many of the women expected to work in their new country. A major attraction was larger dwellings and home ownership - both high priorities for young families.

The expectations of British immigrants tended to be overly optimistic and this raised a number of questions about the selective nature of the information that they used. Although a range of publicity was typically consulted, the biggest single influence in the British emigrant case was the presence of relatives in New Zealand, followed by friends. The most influential information came from personal contacts rather than through the market and government information sources (Zodgekar, 1991, p. 40).

In a way this research remained incomplete, as Arvind was left wondering about the gap between expectations and how this was resolved by migrants (Zodgekar, 1994a). "It seems to me," he wrote towards the end of 1991, "that such a high perception of New Zealand is the result of stereotyped and much publicised material on selected aspects of New Zealand society, economy and environment. It would not be surprising if such a pre-migration image leads to some frustration among the emigrants..."
after their arrival in New Zealand” (Zodgekar, 1990a, p. 433). Arvind was well aware that the adjustments British immigrants had to make paled in comparison to those arriving from India.

**Indians in New Zealand**

It is no surprise, given his previous work, that Arvind was asked on repeated occasions to write about the second largest group of Asian immigrants to New Zealand - a heterogeneous group which the host society simply refers to as 'Indians'. Arvind wrote two papers on this topic; the first was started in the late 1970s (Zodgekar, 1980a) and the second some twenty years later (Zodgekar, 2009) and a related report (Davey, Keeling & Zodgekar, 2010). All three contribute to our understanding of the history of Indian settlement in New Zealand and its contemporary characteristics. We learn for example of the episodic growth in Indian in-migration to New Zealand; a burst between 1916 and 1921 and then a long period of restricted growth. However it was not until after 1945, when the Indian population was only 1554, that Indians began entering the country in substantial numbers. The number had risen to 42,408 by 1996, and had doubled to 104,582 by 2006. Initially, young males dominated but the age-sex structure evened out over the course of the last century (Zodgekar, 1980a).

The history of Indian settlement was closely related to decisions made by the New Zealand government: the 1899 Immigration Restriction Act, the Act of 1920 and the prevailing discretionary power of the Minister of Customs to control entry. Later acts were to greatly influence the educational and hence the occupational structure of immigrants with an initial concentration in farming and market gardening before World War II giving way to white collar and professional occupations in the contemporary period.

Not only had the Indian population become more occupationally diverse but the early homogeneity of the population that prevailed before the Second World War (over 90 percent from Gujarat) gave way to many different Indian communities distinguished by origin, language, religion and caste. The recent growth has meant that at the 2006 Census only 22.8 percent of resident Indian were born in New Zealand, many arriving from Fiji after the 1987 coup. Despite having qualifications levels which exceeded the New Zealand average, unemployment rates among educated Indian immigrants remain comparatively high.
The changing face of immigration

While it was the British and the Indian populations that absorbed much of Arvind's research on immigration, he also had the opportunity to comment more broadly on immigration and to consider the way in which international migration was changing the face of New Zealand's population in his chapter for New Zealand Identities: Departures and Destinations (Zodgekar, 2005a). “The increasingly diverse composition of New Zealand society along with a growing sense of independence from the colonial past and quest for competitive advantage in the global market,” he foresaw, “were bound to be reflected in a range of developments relating to citizenship, and national and cultural identity” (p. 140).

In that chapter, Arvind looked at the broad aspects of immigration policy development since 1986, and then describes how the composition of the population has been modified as a result. After laying out the numbers he turned to the variety of migrant experiences which he labels, insightfully, “towards integration and marginalisation”.

Arvind noted how, “The overall pattern of inequality in average income clearly shows that immigrants from traditional sources achieve parity or exceed the incomes of New Zealand-born persons, but those from non-traditional sources do not perform as well” (p. 148). These are heartfelt words as Arvind was well aware of the dangers of migrants and non-migrants growing apart. Adjustment and adaptation, he stressed, are two-way processes.

Successful integration of immigrants in New Zealand will depend on new ideas and new neighbours being seen as an asset in meeting the challenges of an ineluctably changing world. Migrants will also need to take an equal responsibility in the process of adaptation and integration by making an effort to adjust to the new social and cultural environment. Much of the evidence …shows that New Zealand is still some distance from being either a bicultural or multicultural society….The real concern for New Zealand’s future is not so much to do with immigration policy, but the lack of government investment in mechanisms to ensure understanding and tolerance between entities, especially in tough economic circumstances (p. 149).

While the introduction of ‘cultural days’ in New Zealand is an important symbolic accommodation of ethnic diversity and clear evidence of the transformation and secularisation of the public celebration of such events in
New Zealand, genuine tolerance and mutual recognition have been slower to arrive by because culturally-based needs are harder and they involve targeting resources (p. 152).

One hitherto neglected but growing group in New Zealand society is the ageing immigrant. In his most recent publication Arvind, together with Judith Davey and Sally Keeling, use interviews with representatives of the Indian community organisations and family case studies to explore the interaction between family, ageing and migration (Davey, Keeling & Zodgekar, 2010). Among Indians over 65 years, about half were born in India and a third in Fiji. Most older Indians therefore are immigrants, and the authors write poignantly about instances of social isolation, loneliness and dependence, as older Indians negotiate living arrangements, care and support with their New Zealand based families. In addressing this sensitive issue Arvind has again raised a matter of importance for consideration by the broader New Zealand public.

Conclusion

Arvind published in some of the best international journals in the field, and often as the sole author. He was in high demand as a contributor of chapters on demography due to his highly lucid, no nonsense prose, his scientific attention to the record and, above all, to an ability to focus on the demographic processes that mattered to a contemporary audience. There was a very careful delimitation in Arvind’s mind between what could be said on the basis of the facts (paying due attention to how reliable those ‘facts’ were in the first place) and what was speculation. One gets the sense that he was never particularly comfortable in speculating but his subject matter almost demanded it, for “what was likely to happen next” is the *sine qua non* of the demographer’s craft. As a professional demographer, Arvind never shied away from that responsibility either in text or in his numerous radio broadcasts and television work. In retrospect, his accumulated texts are ever more valuable because of this.

With Arvind’s retirement the New Zealand university system is left with the stark fact that now only one university in New Zealand teaches Population Studies - the University of Waikato. This is a marked departure from the situation in the 1970s where universities in the main centres each taught the fundamentals of demography. If there is a message from this review of Arvind’s contribution to our understanding of New Zealand
society, it lies in the importance of rebuilding our stock of trained
demographers throughout the university system so that all students might
benefit.

That most graduates in the social sciences complete their studies
without being exposed to even basic demographic concepts, let alone any
training in demography, means many of our future policy analysts are going
to be less sensitive to the importance of understanding the vital processes of
population change and be less likely as a result to appreciate their
implications. All the more reason then to celebrate the contribution which
Arvind has made to the education not only of the thousands of students who
took his courses over three and a half decades but also of the wider public
who have been able to draw on exceedingly clear treatments of all the major
implications of demographic change experienced within New Zealand.

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Arvind for being willing to share his papers; however, the responsibility for
interpreting their content correctly remains mine.

Notes

1 The United Nations Economic and Social Commission for Asia and the Pacific
(UNESCAP) is the regional development arm of the United Nations for the Asia-
Pacific region. With a membership of 62 Governments, 58 of which are in the
region, and a geographical scope that stretches from Turkey in the west to the
Pacific island nation of Kiribati in the east, and from the Russian Federation in
the north to New Zealand in the south, ESCAP is the most comprehensive of
the United Nations five regional commissions. Accessed from
http://www.unescap.org/about/index.asp.

2 Professor Thomas subsequently became the first female professor at the
Wharton school and is acknowledged as one of the most accomplished
sociologists of her generation, her contribution being primarily in developing
the relationships between social, economic and demographic variables.
http://www.archives.upenn.edu/faids/upt/upt50/thomasdst.html

3 Two variables which would otherwise be included in such an analysis were not
available from the census data used: duration of residence and hours of work.
However Arvind was well aware of this and was careful not to overstate his
conclusions, and multivariate studies with a larger range of variables using
regression analysis conducted subsequently have reached substantively the same conclusions.

References


