Of Temporal Politics and Demographic Anxieties: "Young Mothers" in Demographic Predictions and Social Life in Vanuatu

Alexandra Widmer *York University*

Abstract: In this article, I examine demographic predictions and preliminary youth and population policy in concert with young women's experiences during and immediately after pregnancy in Vanuatu, a Pacific island nation with rapid population growth. I propose that time, in representations of the future and the past as they relate to social and biological reproduction, is a valuable lens for analyzing the interplay between demographic knowledge in development discourse and daily lives of young women. In this way, I add the notion of temporal politics to the social and historical analysis of demography that emphasizes biopolitics and geopolitics.

Keywords: Time, demography, Vanuatu, reproduction, biopolitics, geopolitics

Résumé : Dans cet article, je m'intéresse aux prédictions démographiques et aux politiques préliminaires relatives à la jeunesse et à la population ainsi qu'aux expériences de jeunes femmes pendant et immédiatement après la grossesse, au Vanuatu, une nation insulaire du Pacifique qui connaît une croissance démographique rapide. Je propose que le temps, dans les représentations de l'avenir et du passé qu'il articule en relation avec la reproduction sociale et biologique, constitue une lentille privilégiée pour analyser l'interaction entre le savoir démographique dans le discours sur le développement et la vie quotidienne des jeunes femmes. De cette façon, j'ajoute la notion de politiques temporelles à l'analyse sociale et historique de la démographie en mettant l'accent sur la biopolitique et la géopolitique.

Mots-clés : temps, démographie, Vanuatu, reproduction, biopolitique, géopolitique

Introduction

Why do populations grow or decline too rapidly? How can population size be controlled? What are the relevant categorizations within a population required to answer these questions? Such enquiries are associated with demographic expertise, the statistical study of populations whereby population size, social composition and change are documented. For demographers, human populations are the sum of people living within a particular boundary that can be entered through immigration or birth and exited by death or emigration. The population is differentiated into categories, often by sex and age and geographic location, as well as ethnicity, nationality or education status. Analyzing data generated from vital statistics—which typically count births, deaths, marital status—or a census—which typically enumerates households, education, place of birth, religion, citizenship and employment status—demographic methods mean that the rates of growth or decline in specific categories of the population can be discerned against normative expectations. Demographers make predictions that are used by governments and NGOs for planning and interventions.

Thus, the "populations" that appear in development policies and projects are, as Barbara Duden (1992) writes, "statistical driftwood" (1992:149). Like other concepts in development discourse, she argues that populations

> are immigrants into ordinary speech from the language of statistics, algorithms which are used outside of their original context. They are used to generate the semblance of a referent which may only be a pseudo-reality, but which at the same time gives the impression of something very important and obvious, and which the layman cannot understand without an explanation by experts. [1992:149]

Her provocative words indicate the high stakes of how people are "made up" (Hacking 1986) in the human sciences. Indeed, Hoehler argues that "the question of

how humans are statistically aggregated into populations and these populations are discriminated into valuable or dispensable lives, is in accordance with prevailing economic regimes" (2007:46). Furthermore, Hartmann and the Population and Development organization's analysis of the representations of overpopulation in need of control can target vulnerable groups and perpetuate negative stereotypes (Hartmann 1995; Population and Development Program 2008).

Demography is a form of expert knowledge that has been an applied science since its consolidation as a formal discipline in the post–World War II era, where scientists generated and represented numbers with the intention of being useful for intervening in particular populations or segments of populations (Greenhalgh 1996; Ramsden 2002; Szreter et al. 2004). In countries in the global south, issues of social reproduction become disaggregated into technical issues of population management, maternal and child health, family planning, disease reduction and land use planning and then inserted into development discourse. They become part of modernizing agendas, population policies of nation states and development projects that rely on demographic understandings of social and biological processes.

In this way, the numbers are associated with explanatory narratives, making action seem self-evident. Scholars have called attention to this relationship between demographic knowledge and biopolitical interventions affecting gender and sexuality that resulted in population control measures of global scope coordinated by the United Nations Population Fund (UNFPA), (e.g., Connelly 2003, 2008). By analyzing the metaphors and representations of population growth in the postwar era, like "carrying capacity," "population density" and "spaceship earth," Hoehler (2006, 2007) argues that the production of numbers of people tends to take place with respect to spatial concepts. Relatedly, Allison Bashford (2007, 2008a, 2008b, in press) argues that, since the interwar period, agriculture and land use issues have framed discussions of population issues, linking global and local populations. Therefore, Bashford continues, scholars need to take geopolitical concerns associated with population more seriously, widening the scholarly focus from the links among demography, population policy and control of reproductive sexuality. Demography has thus been shown to be intimately connected to policies worldwide aimed to impact sexuality, birth control, migration, agriculture, immigration and urban land use, to name but a few of the biopolitical and geopolitical dimensions of planning issues at the level of population.

I argue here that the temporal dimension of demographic knowledge is also an important consideration in its political implications. After World War II, the American demographers Frank Notestein and Kingsley Davis popularized the "demographic transition theory" (Ittmann 1999:71–72). Tasked with improving societies through modernization and development, demographers no longer saw rapid population growth as a racial adaptation but the result of problematic traditions that needed to be modernized (Ramsden 2002). Transition and modernization are thus closely connected in demography (Johnson-Hanks 2008:308) as is the tendency to think that these changes take place in predictable and irreversible fashion (Greenhalgh 1996).

My interest here is to discuss the politics of time in demographic explanations[1] of population change and local concerns in Vanuatu over what social scientists would call social reproduction. Like Muehlmann's concern with the social context of enumerative practices that relegate certain aspects of human experience to "a realm that simply does not count" (2012:340), by looking at these in concert, I aim to present aspects of social reproduction that demographic knowledge and policies must contend with but cannot account for. I am proposing that time, in representations of the future and the past as they relate to social and biological reproduction, is a valuable lens for analyzing the interplay between demographic knowledge, policy and the daily lives of young women becoming mothers in a peri-urban village in Vanuatu.

I begin with a description of expert predictions for Vanuatu and show how this expert knowledge, in addition to biopolitical and geopolitical dimensions, asserts expertise through a temporal politics. The present is framed as what should be governed by representations of the future. I then provide a description of a document intended to become the basis of a national youth policy in Vanuatu, showing how "young mother" and "young people," as demographic categories, also become targets for intervention. I then locate these demographic categories as social identities implicated in contemporary concerns about reproduction in a peri-urban village. I present young women's experiences during pregnancy and the older generation's concerns in respect to marriage and pregnancy and show how these evoke temporal dimensions.

By following the use of time, in addition to the biopolitics and geopolitics that scholars of demography and population politics analyze, I am interested in the specific authority gained by the temporal dimension of demography and how that links national futures to particular groups of individuals' bodies through the promise of

modern futures and, in the documents written in Vanuatu, the right relation to the past. I also explore how local understandings of social reproduction evoke particular notions of future and past, with gendered implications and sanctions.

What Do the Demographic Experts Say?

The 2009 Vanuatu census reports the following figures: total population 234,023; children under 15: 90,973; youth 15 to 24: 45,423. Since the previous census in 1999, the national growth rate had been 2.3 per cent, while the annual growth rate in Vila had been 4.1 per cent. To put these figures in historical context, from the mid-1800s until the 1940s, missionaries and researchers reported on a rapid population decline in Vanuatu and contributed to scientific debates about race, heredity and human variation in European population sciences (Widmer 2012). Beginning in the 1970s (e.g., Bedford 1973; Bonnemaison 1976) and escalating in the 2000s, there was a concern that the population, especially urban, was growing too rapidly. Currently, the UNFPA states that Vanuatu's "total fertility rate of 3.9 lifetime births per woman is one of the highest in the Pacific" (2012a).[2] The predictions are alarming. Robert F. Grace, who worked at the Port Vila Central Hospital, indicated that the high birth rates "will place intolerable strains on the development of the country" (2002:17). New Zealand demographer Haberkorn writes that the high levels of fertility, urban migration and lack of population policies "have the potential to derail national, regional and international development goals and objectives and, in the process, jeopardize Pacific Leaders' visions of a secure, prosperous and peaceful Pacific Region where people live free and worthwhile lives" (2008:99). Australian Helen Ware (2005) warns that current population growth makes Vanuatu vulnerable to the possibility of political violence, like that in the Solomon Islands or Fiji. All are worried about the large and increasing number of young people who are, or soon will be, having children. Demographers are concerned about youth employment, the unequal position of women, urban migration and low rates of birth control use. Their solutions include a proactive national population policy (Haberkorn 2008), increasing tubal ligations, hormone and barrier methods of contraception (Grace 2002), increasing the education of women (Haberkorn 2008; Grace 2002; Ware 2005) and promoting emigration as a "safety valve" because there are not enough jobs for young people in Vanuatu (Ware 2005).

Such anxieties, linking social and economic problems to rapid population growth, are widely held about island nations in the southwestern Pacific. For example, Graeme Hugo of the University of Adelaide, interviewed by the Australian Broadcasting Corporation, claims that urban demographic growth in Papua New Guinea needs to be taken seriously, as it could eventually lead to social unrest (Razak and Hugo 2012), resulting in the headline "Population Pressure Could Cause 'Melanesian Spring.'" His solution is to promote migration to Australia, as New Zealand has done, which could benefit not only Australia but also would be a viable part of the development plan of the sending nation (Hugo 2009; Razak and Hugo 2012). Finally, on the significance of demographic research, Hugo states: "People are important. And detailed information on populations and the changes we can expect for the future are very important to create equitable, diverse and healthy societies" (Hugo 2012).

In this overview of demographic predictions for Vanuatu, the geopolitical spaces of concern and intervention become apparent in the concern about migration between urban and rural areas and in the proposal for augmenting migration between developed and underdeveloped countries. Experts promote biopolitical interventions of expanding access to biomedical birth control and the education of youth and young women in particular. It is the dreadful future, if change is not made in the present, which gives the knowledge its weight. It is a notion of a future that can be influenced through accounting in a modernizing logic. The predictions call for interventions that evoke the anticipatory dimension of contemporary governance, identified by Adams and colleagues: "The present is governed, almost every scale, as though the future is what mattered most" (2009:48). This is not to contest the good intentions of the demographic experts or the truth of their predictions; rather, it is to look at the categories of knowledge that become objects of intervention—that is, to ask which people are marked for improvement.

Demography and Emergent Population and Youth Policy

In 2010, the government of Vanuatu's approach to using the demographic knowledge was framed within development language: a good future that measures "progress against basic development goals" (Government of Vanuatu 2010:iii) in accordance with the resources available. In February 2012, the *Vanuatu Daily Post* reported on the launch of the National Population Policy Document by then prime minister Sato Kilman, authored by United Nations Population Fund. In his remarks, the prime minister equated good governance and improving quality of life with accurate demographic knowledge of the population, without which planning would be impossible. He continued: "The National Population Policy 2011–2020 is not a 'population control' policy, it does not aim

to tell families how many children they can have nor does it attempt to control population movements within the country"; rather, "the primary goal of the policy is to improve the quality of life through effective planning of development efforts" (Joshua 2012:1). To that date, while birth control was freely available either through NGO clinics or the Maternal Child Health clinic at Port Vila hospital and tubal ligations were available, with husband's signature, programs to act on the demographic knowledge had been modest.

The *Youth Monograph: Young People in Vanuatu* (2012), published by the Vanuatu National Statistics Office, uses data from the *2009 National Population and Housing Census* to focus on young people's experiences. It highlights the importance of a national youth policy, still under revision at the time that the report was published, to meet "Millenial Development Goals" and the well-being of young people. The "Vision of the National Youth Policy" is highlighted in a special text box, as follows:

> The young people of Vanuatu use their energies in constructive ways, availing themselves of traditional and religious values, along with modern technologies, in support of the national's socio-economic development and their financial, physical, social, spiritual and family needs. [2012:11]

Ultimately, the Vanuatu National Youth Policy will identify "the challenges and opportunities young people have in Vanuatu. These are: youth employment ... factors causing malnutrition; reproductive and sexual health; youth health more generally and youth contributions to their community, province and the nation" (2012:13). While the report begins with a fairly broad approach to aspects of young people's lives, including sexual and reproductive health, the remainder of the report has a more narrow focus because

> the census results can only provide data which address three issues, sex ratios of literacy and education rates and the adolescent birth rate. The latter presents a risk to health and the adolescent (15–19 years) birth rate is an important Millennium Development Goal[3] indicator of progress towards improving maternal health. [2012:13]

The report takes youth as a time "marking transition."

> A young person's success or failure in their youth transition will have a strong impact on their later life outcomes. For example, if a young man has a long period of looking for work and/or a series of temporary jobs, this may delay when he leaves home and sets up his own household. It is also likely to affect his self-confidence, his attitudes to government and his capacity to contribute to his community. Similarly, a young adolescent girl who has a child is at greater risk of dying from complications and her child has a lower chance of survival. Teenage mothers are also more likely to be school dropouts and to have more limited life options as a result. [2012:16]

Continuing in the challenges of transition, "a key marker of the transition to adult status for young people is getting married or forming an informal 'de-facto' relationship by living together with a partner" (2012:19). Furthermore, the report notes, "An important change in behaviour for young people is managing new health risks. Many young people in their late teenage years and in their twenties begin smoking, consuming alcohol and other substances such as kava, and engaging in high-risk sex" (2012:26).

The report compares urban and rural birth rates for women 15 to 19 (77/1000 in rural areas and 40/1,000 in urban areas). The difference perhaps is explained as having "to do with the much higher proportion of young women in urban areas who are still in secondary education."[4] The education level is repeated later in association with adolescent pregnancy:

> Teenage pregnancy is associated with a low level of education attainment.... Young mothers are more likely to have either not been to school at all, or attended only some primary schooling or have only completed primary. In contrast, young women who have completed secondary school are more likely to delay marriage, are less likely to be young mothers and more likely to have fewer children over their lifetime. [2012:30]

To summarize, the framework of the document identifies demographic categories and emphasizes that young people are oriented in time. Ni-Vanuatu[5] young people's success in education, health and marriage takes place by being oriented correctly to tradition, religion, development and modernization. The emphasis is on passing through transitions like education and marriage, not on access to birth control or disseminating knowledge of safer sex. (Though, to be sure, the structure of the census data must be considered a factor here). Young mothers are framed as those who have passed through the "transition" less than successfully.

Disciplining the conduct of women, and mothers in particular, with respect to improving the future or controlling cultural change, is not new in Vanuatu. Women's activities were the focus of Presbyterian missionary endeavours in the late 19th century (Jolly 1991), and

women's mothering abilities were a key interest of scientists during the time of population decline (Jolly 1998, 2001a, 2001b). In a Northern Vanuatu articulation of tradition, women's comportment was curtailed due to the nature of men's labour migration in the 20th century (Jolly 1987). Cummings's analysis shows how young women, especially single or childless, living in Port Vila are "matter out of time" (2009). Here, in the hope of planning a particular future, the discussion of "teenaged mothers," in the demographic knowledge and policy preparation, links individual comportment with the development of a nation in gendered ways.

This is not to be read as a critique of a nascent policy that encourages girls to finish their education. Indeed, the Vanuatu National Statistics Office has been engaged in the promotion of Pacific definitions of well-being that disrupt monolithic development discourses in important ways (Malvatumauri National Council of Chiefs and Vanuatu National Statistics Office 2012). Yet, it is worthwhile to consider the construction of the subjects of concern. The emphasis on transitions, education and marriage, managing concerns like "risky sex," does position the "young mother" as someone who has failed to navigate changes and whose life circumstances stand in the way of the development of the nation.

The Pacific Institute of Public Policy,[6] based in Port Vila, published a four-page discussion paper on demographic growth and the troubled future of democracy in Melanesia. The paper's focus is democracy in the region and, with that in mind, the demographic situation is a potential threat because young people—a growing population—are "tired of the status quo" (2011:3), like youth in the Middle East. To the institute's thinking, the challenges that a youth population faces are less a problem of fertility than effective governance and land distribution. The institute states:

> Young people are getting angrier at the increasingly alienation of their birthright—their land. There are more and more young people, increasingly urbanized, many without *kastom* land to return to and few opportunities for formal employment. Higher costs of living, rising food prices and land being sold off to foreigners are all adding to the pressure. What happens when a couple of generations have no jobs and no land? [2011:3]

The discussion paper defines *kastom* as a "pijin word used to refer to traditional culture, including religion, economics, art and tradition in Melanesia" (2011:3). Anthropologists have also had a sustained interest in kastom, which in Vanuatu—to summarize a vast literature—refers to specific items and aspects in indigenous knowledge and practices (Bolton 2003: 51). While it is part of a post-colonial national discourse (e.g., Mitchell 2011), produced in opposition to missionary judgements and colonial impositions (e.g., Tonkinson 1982), kastom also tends to be invoked in moral ways with respect to what "our ancestors did" in opposition to external influences. Of note here, which will be elaborated below, is a discourse that selectively evokes the importance of past practices in the present with an ethical inflection.

Anthropologists have analyzed the effects of the global reach of demographic and population knowledge in public health policy and the resulting family planning programs and maternal health care clinics in their work with women and health workers. These policies and projects have had varying degrees of success for many reasons. Most significantly their accomplishments can be limited because the biomedical definition of sex, birth and pregnancy is insufficiently recognized as culturally and politically inflected (Adams and Pigg 2005; Berry 2010; Chapman 2010) and because the projects do not challenge systemic problems and end up reproducing inequalities (Maternowska 2006). When considering how expert knowledge becomes part of development schemes and policies, Li astutely claims that, "while the will to govern is expansive, there is nothing determinate about the outcomes" (2007:280). This is particularly true here, when the policy is not yet written, let alone at the point of implementation. As the policies are emergent, I discuss contemporary concerns about population and social reproduction in daily life. "Young people" and "women," in addition to being demographic categories that can be used to predict futures, are also social categories whose local meanings inform how demographic and population knowledge circulates and shapes people's daily lives. Connecting the mounting numbers and the demographic category of "teenaged mother" to young women's lives during pregnancy is the focus of the remainder of the article.

Time, Population Increase and Social Reproduction

Since the publication of the 2009 census, the Vanuatu government has posted a "live population clock" outside the main government building opposite the main market house in downtown Port Vila. The sign is also posted on the Vanuatu National Statistics office website (Vanuatu National Statistics Office 2012). There is a widespread awareness that the population is increasing rapidly in Port Vila and in Pango village, the peri-urban village where I lived during ethnographic fieldwork in 2003 and 2010. Here, I focus on the population increase due to birth and not on people's concern about urban popula-

tion increase due to migration, which highlights inter-island differences and fuels anxieties about meeting kinship obligations (Widmer 2013).

One of the ways that alarm circulated about the increasing number of births was in the rumours about the number of births per month at the Port Vila Central Hospital. As well, stories of women who had just given birth having to sleep on mats on the hospital floor would frequently be told in Pango and Port Vila. While these rumours implicitly highlight the unacceptable lack of hospital resources commonly faced in developing countries, it was the number of "young mothers" that was a central factor in the explanations of the hospital numbers.

When bringing my older daughter home from the preschool in the village, I greeted an older woman and we exchanged news. She put down the baskets she was carrying and told me all the things she was doing for the church and her family. She had been working a pastor's garden, assisting with a fund-raiser and taking care of children. "I work for the community," she said, "I always think about others, not like those young mothers." In many such discussions, particularly with older adults, young mothers would be grouped with other social issues associated with youth and deemed problematic, such as excessive kava, smoking or drug use. "Young mothers" also elicited pity—they were fervently prayed for on Mother's Day in church. When I inquired about the factors that made young mothers so challenging, I heard, especially from older generations, that the fact women were young was a problem, but equally if not more dubious was the fact that they were unmarried. Young mothers were reproached for being reckless, as not thinking about the future or "the consequences of their actions." They were considered stubborn (*strong hed*) and also at times selfish. Strong hed is frequently used to describe children who do not do as they are told or adults who do not do follow expectations. Selfish, in Pango, means many things, but here it is referring to not engaging in social obligations and relationships that link the current generation of young adults with older ones (see also Lind in press).

When I listened to the life stories of the oldest women in Pango (as part of my project to understand the changes to women's knowledge of pregnancy and birth from the 1950s to today), the pattern of the narratives would be some variation of the following: "I was born in this island/village, I had children, married and moved to Pango, or this area of Pango, and now all my children are married and live in these places, and so, thank God, I can rest now." Pregnancies frequently preceded marriages but, for most older mothers and grandmothers in Pango, marriage was something they did. Often, though certainly not always, they married in conjunction with the arrangement their fathers had made. The idealized life narrative for young women today also includes completing an education, preferably before marriage and children. In these milestones, the idealized life narrative represents moments that in Vanuatu are explicitly not individual milestones but points in a life where obligations of generational expectations are enacted, as a subsequent section will show.

"I just wanted to be invisible": Young Women *Stap Qwaet*

In 2010, together with a young woman from Pango, we interviewed 16 women about their experiences during pregnancy, birth and the immediate postpartum time. They all had children less than one year of age and most could be considered "young mothers" or were when they had their first child. Afternoons being a time when there is a lull in the never-ending duties of laundering, cooking and gardening, we sat on pandanus mats under shelters outside corrugated iron houses, at tables or on couches in cement houses and listened. Many of the young women were not married to the father of the child and lived with their own parents and extended families, usually on land owned by their kin group but occasionally in rented housing. The married mothers had often moved to a new house with their husband on the land owned by their husband's kin.

"I just wanted to be invisible," a young woman told me about the time when she was pregnant. Indeed, as we listened to their experiences of pregnancy, birth and the early postpartum time, among the unmarried mothers, we frequently heard about how women would *stap qwaet*[7] and not go out much during their pregnancy. As elsewhere in Vanuatu, pregnant women in Pango can be seen as vulnerable to sorcery (Bourdy and Walter 1992:187) and are encouraged to *no wokbaot*—that is, to stay close to home and avoid places where sorcery attacks could happen. Also, pregnant women would be aware of the sanction to avoid, at any time of day; those dangerous places in the landscape (*tabu ples*) where their clan's (*naflak*) ancestral spirits are present.

There are additional reasons, in this situation, to stap qwaet or no wokbaot during pregnancy. Often there were unanswered questions about how their own and the baby's future would unfold. The young women wanted to avoid the possible gossip—potentially sympathetic or cruel—about their pregnancy, however temporarily, so they might go out of their way to avoid being seen. Learning when to stap qwaet, Cummings (2008) writes, is an aspect of managing feminine sexual

modesty in Vanuatu. Staying out of sight is a means of avoiding being the source of gossip, that ubiquitous activity of sexual culture. Young pregnant women who were unmarried, and this is a frequent circumstance, are particularly affected by fear of gossip.

Concern with not being seen did not appear to affect young women's access to biomedical care during pregnancy, though in a few cases, it delayed it. Fear of gossip did affect access to family planning, in that fear of being seen at the clinic kept young women from going to get information and supplies, a point reiterated in my many conversations with community workers, peer health educators and family planning counsellors (see also Cummings 2008). In well over half of the interviews, the young women said that they first received information about family planning at their first postpartum visit. Most said that they wished they had more family planning information sooner and identified this as a problem that needed to be solved.

Spoilem Fiujia

The young women also worried about the reactions of the parents of the prospective father, who, according to the selectively invoked kastom, was not obligated to acknowledge the child without a marriage. But more than anything, the young women feared the anger of their own parents (who generally welcomed the baby once it was born). They feared being chastised that they had not thought about "the consequences" or that they had "ruined their future" (*spoilem fiuja*).

And yet, the parents of the prospective father would not chastise (*tok strong*) him in the same way. Nor is there really a social category of "young father" that evokes the same feelings of worry and frustration. When we talked about this discrepancy with the young women—a topic that elicited smiles and giggles—we typically heard that kastom puts men higher; women are *strong hed* and don't think about the consequences, and, because of kastom, the parents of the (unmarried) girl have to look after her and the baby.

There is a broadly held hope, among those who can financially manage to stay in school, that young women finish school before having children. Straying from this opens one up to disciplinary measures, from parents and older generations, about ruining the future. While some young women told us that this might be true, that young women needed to think more about the future, others deeply resented the judgements of people who react as though the young women had intentionally ruined their future. With regard to comments about how disappointed some older adults were that she got pregnant, one young woman told me that she had not done it on purpose but that "it just happened!" This is not naiveté but an intelligent woman making a noteworthy point. She is evoking the volatility of the relationship between desire and pregnancy (and the prevention of pregnancy) and the uncertainty of the future. It is also highlighting the difficulty of controlling life events in demanding social circumstances with few resources.

Becoming a mother is challenging under all circumstances and, to be sure, more so if one fits the demographic and social category of "young mother." Still, within the options they had, most of the young women I knew did not stop working to make a good future for themselves and their children after this life transition. Young mothers participated in subsistence agriculture and paid and unpaid household labour and child care, making it possible for those with wage work in their own household and in others to hold their jobs in town. Some young mothers held civil service and NGO positions; still others continued their education or started their own businesses. These productive activities were more possible for those who had all variety of support, at that time mostly from their parents and siblings.

"Young Mothers" and Times of Rapid Social Change

The criticism of young unmarried mothers is to be understood in the context of a widespread feeling of crisis about the future. In Pango, 2010 was a stressful and divisive time due to disputes over land sales and the chiefly title. Indeed, the land transfers to foreign holdings had reached such an extent that many wondered whether life as they knew it could continue. The resorts in the village and in close proximity to it gave Pango the reputation among other island groups in Port Vila that they have "spoiled their future." One man in Pango told me, while gathering his nets after fishing on the reef and gesturing to the coastal land sold to developers, that "in the future, people from Pango will be begging in the street." The idea that a group of people would have to live from begging—an activity with no cultural precedent in Vanuatu—is a dire comment on the fear of a complete undermining of how life had hitherto been lived. Pango village, given its proximity to the capital, was incorporated into colonial projects more intensely than other places in the archipelago (Rawlings 1999). Still, this has been a place where people had sustainable social and environmental networks that shaped forms of exchanges and obligations, which in turn formed the basis of sociality. Without doubt, the social forms have

shifted; yet, in many ways they persisted through the forms of colonialism and capitalism and Christianity that had been taken up and inculcated in Vanuatu. But at that point in 2010, those bases of sociality felt under threat.

During this tense time, a village-wide event, which managed to mobilize most people's excitement, resources and time in a whirlwind of carefully recorded gift exchanges, was a double wedding of two lovely, very pregnant women to two brothers from a prominent family. The importance of weddings for social reproduction in Pango and elsewhere is obviously manifold. Of relevance for this discussion about temporal frameworks and social reproduction is the oldest generation in Pango maintains that weddings are the only situation in Pango where real kastom is still practiced. As evidence of kastom, I was told that a bride price[8] is generally paid (depending on the Christian denomination) and traditional wealth items such as yams, pigs and mats are exchanged. In historical narratives in Pango, women are described as peacemakers between villages, families and clans (naflak) through marriage arrangements. In ideal situations, a woman would go to her father's naflak, and then a woman from that clan would marry into hers. While these unions were possible to break and were not universal, even in previous generations, they are much less common now.

Contemporary marriages are more of a circumstance for the fulfilment and regeneration of obligations between parents and their now adult children than they are of relations between clans (though clans are not absent). The marriage is agreed upon by both sets of parents and the engagement is formalized in a ceremony. Then in the months leading to the wedding, there are meetings of family members where it is decided how the wedding will be paid for, creating relationships between the two kin groups. In 2010, the preparations for the bride price ceremony, the church wedding and feast after the church wedding involved many, if not most, families in the village. The women were occupied with sewing dresses, making mats and baskets and food preparation, while the men were engaged with shelter-making and pig preparations. There were frequent trips into town to buy what could not be found in the gardens. Then, the gifts given at the events of the marriage are meticulously listed in columns in a book; this will be consulted in order to be able to reciprocate properly at future weddings.

The social importance of the wide net of relations for families whose adult children are getting married and for everyone in the village cannot be underestimated. Weddings are a time of demonstrating the extent of relationships and that obligations are being met between generations and between families in the village. Participating in exchanges performs the "right" orientation to the past and future. It demonstrates that there is reciprocity between older and upcoming generations and also shows the socially acceptable combinations of kastom and Christianity. Weddings, in short, are no place for the selfish.

In marriage, multiple obligations—some of them identified as kastom, some identified as Christian—to other generations are honoured. Being in right orientation to the future and the past is evidenced in how one meets one's obligations to other generations. "Young mothers" challenge this. Unmarried young mothers at this moment in time, marked by multifactorial rapid population growth and accelerated integration into market economies, have the difficult position of being visible and vulnerable examples of people who are sometimes deemed selfish and reckless and at other times are pitied.

I have argued here that paying attention to temporal frameworks is a way to analyze the connection between demographic knowledge and local understandings of population growth. This is a way to address Duden's concern that the population categories of statistical knowledge "can generate the semblance of a referent which may only be a pseudo-reality" (1992:149). I have discussed the temporal dimensions of the rationale in the *Youth Monograph*. The publication combines the language of development and modernization with locally and morally inflected politics of gender and generation. The publication emphasizes traditional values for youth, as well as marriage and education before having children. From interviews and ethnographic research, I have shown that in social circulation, these factors also make young women want to be invisible during their pregnancies.

The social identity of "young people" in Vanuatu, Mitchell (2011) writes, carries multiple meanings as young people can be the "most vulnerable victims" of social change, as well as a generation with insufficient respect for traditional authority. Women in Vanuatu, Cummings argues, "are deemed culpable for the negative effects of social change" (2008:134). The "young mother," with respect to the social change associated with rapid population growth and birthrate, is at the intersections of these narrations that attempt to account for rapid social change. These intersections create circumstances for social marginalization in young mothers' everyday lives. It also means that "young mothers" are implicitly a threat to collective futures in distinction to married mothers.

Conclusion

There have been calls to bring anthropological and demographic inquiry together to understand the social and biological dynamics of fertility and reproduction. In a landmark volume, Greenhalgh called for the demographic study of fertility and reproduction to include "four aspects of reproductive dynamics: culture, history, gender and power" (1995:5) (see also Kertzer and Fricke 1997; Szreter et al. 2004). In Melanesia in particular, Ulijaszek's (2008) volume portrays the importance of understanding local symbols and subsistence practices that connect the social and biological reproduction of individuals, populations and landscapes. Here, as a lens for thinking through the social and political entanglements of knowledge and social and biological reproduction, I have called attention to a politics of temporality. In times of population growth and rapid changes in land use and capitalist expansion, as is the case in Vanuatu, the future is a particularly contested terrain. I have shown how the expert knowledge of demography accrues authority in predicting particular futures that entail action in the present. Analyzing knowledge and representations of population size is vital, as these products of demographic expertise are part of how Pacific islands get incorporated into international development agendas. Ni-Vanuatu concerns over social reproduction also entail temporal dimensions in that concern for the future requires being in right relation to the past. These expectations and anxieties come to bear on expectations for young women.

The biopolitical and geopolitical spaces of proposed intervention associated with demographic expertise carry dire pictures of the future if action is not taken. In examining the social entanglements of demographic knowledge in Vanuatu, I find it noteworthy that demographic knowledge has had modest biopolitical and geopolitical effects with respect to government policies, NGO programs and practice. Most salient is the temporal dimension of demographic knowledge that articulates with ni-Vanuatu social categories and politics of gender and generation to accentuate the ways that young mothers should orient themselves in time.

Alexandra Widmer, York University, Department of Anthropology, Vari Hall 2054, 4700 Keele St. Toronto, Ontario M3J 1P3, Canada.
E-mail: alexandrawidmer@gmail.com.

Acknowledgments

This research was conducted during a postdoctoral fellowship at the Max Planck Institute for the History of Science and builds on previous fieldwork funded by the Wenner-Gren Foundation and the Social Sciences and Humanities Research Council of Canada. Grateful thanks go to the many people in Pango and Port Vila who made the research possible, as well as Ricky Heinitz, Veronika Lipphardt and Jean Mitchell.

Notes

1 There is also a fascinating literature that analyzes the temporal dimensions of birth and contraceptive knowledge. Women's reproductive decisions are shaped by cultural notions of time and the lifecycle (Bledsoe 2002). This is especially true about contraceptive use when the future is uncertain due to political and social upheaval (Johnson Hanks 2005). Temporal categories apply to fertility and contraceptive practices in Melanesia as elsewhere (Johnson Hanks 2002). Birthing techniques and the location of birth, classified as traditional or modern, also carry both material and symbolic entanglements (McPherson 1994, 2007; Van Hollen 2003). Knauft (2002) demonstrates the analytical richness of the temporal frameworks at play in framing social works in Melanesia, and Wardlow (2006) lucidly shows that modernities are multiple and overlaid with traditionalisms in gendered ways.

2 Another UNFPA document states that Vanuatu's challenge is to implement its recently approved population policy to pay attention to

> accelerating the fertility transition, which appears to have stalled; Verifying maternal deaths and improving the reliability and completeness of data collection ... Improving access to safe motherhood and emergency obstetric care; Investigating and addressing increased infant mortality in urban areas; Addressing high teenage fertility, particularly in rural areas; Reducing the high rate of unemployment among urban youth. [UNFPA 2012b:1]

3 The youth Millennium Development Goals are as follows:

Goal 1: achieving full and productive employment and decent work for young men and women;
Goal 2: ensuring that children complete their primary schooling, and
Goal 3: eliminating gender disparity at all levels of education.
[Goal 4 absent in monograph]
Goal 5: improving maternal health by reducing the maternal mortality rate and universal access to reproductive health is vital to young mothers in particular.
Goal 6: on combating HIV & AIDS, malaria and other diseases is also highly relevant to young people, in particular preventing HIV & AIDS and assisting those have the ailment. [2012:13]

4 The province of Torba stands out with a high adolescent fertility rate of 116 births per 1,000 of females aged 15 to 19 years. The fertility rate in other provinces is as follows: Sanma (78), Malampa (74), Penama (68) and Tafea (67). Shefa province, which includes Port Vila, has the lowest rate (50).

5 *Ni-Vanuatu*, a postindependence term, are indigenous citizens of Vanuatu.
6 The Pacific Institute of Public Policy is an "independent, not-for-profit and non-partisan think tank, and exists to stimulate and support informed policy debate affecting Pacific island countries" (2011:4).
7 A Bislama term that literally means "being quiet". Bislama is the lingua franca of Vanuatu.
8 *Bride price* is the term from Bislama, the lingua franca in Vanuatu.

References

Adams, Vincanne, Michelle Murphy, and Adele E. Clarke
2009 Anticipation: Technoscience, Life, Affect, Temporality. Subjectivity 28(1):246–265. http://dx.doi.org/10.1057/sub.2009.18.

Adams, Vicanne, and Stacey Pigg, eds.
2005 Sex in Development: Science, Sexuality, and Morality in Global Perspective. Durham: Duke University Press.

Bashford, Alison
2007 Nation, Empire, Globe: The Spaces of Population Debate in the Interwar Years. Comparative Studies in Society and History 49(01):170–201. http://dx.doi.org/10.1017/S0010417507000448.
2008a Population, Geopolitics and International Organizations in the Mid Twentieth Century. Journal of World History 19(3):327–348. http://dx.doi.org/10.1353/jwh.0.0017.
2008b World Population, World Health and Security: 20th Century Trends. Journal of Epidemiology and Population Health 62(3):187–190. http://dx.doi.org/10.1136/jech.2006.055608.
In press
Global Population: History, Geopolitics and Life on Earth. New York: Columbia University Press.

Bedford, Richard
1973 New Hebridean Mobility: a Study in Circular Migration. Canberra: Australian National University.

Berry, Nicole S.
2010 Unsafe Motherhood: Mayan Maternal Mortality and Subjectivity in Post-War Guatemala. New York: Berghahn Books.

Bledsoe, Carolyn
2002 Contingent Lives: Fertility, Time, and Aging in West Africa. Chicago: University of Chicago Press. http://dx.doi.org/10.7208/chicago/9780226058504.001.0001.

Bonnemaison, Joël
1976 Circular Migration and Uncontrolled Migration in the New Hebrides: Proposals for an Effective Urban Migration Policy. South Pacific Bulletin 26(4):7–13.

Bolton, Lissant
2003 Unfolding the Moon: Enacting Women's *Kastom* in Vanuatu. Honolulu: University of Hawai'i Press.

Bourdy, Genevieve, and Annie Walter
1992 Maternity and Medicinal Plants in Vanuatu: The Cycle of Reproduction. Journal of Ethnopharmacology 37(3):179–196. http://dx.doi.org/10.1016/0378-8741(92)90033-N.

Chapman, Rachel Rebekah
2010 Family Secrets: Risking Reproduction in Central Mozambique. Nashville: Vanderbilt University Press.

Connelly, Matthew James
2003 Population Control is History: New Perspectives on the International Campaign to Limit Population Growth. Comparative Studies in Society and History 45(01):122–147. http://dx.doi.org/10.1017/S0010417503000069.
2008 Fatal Misconception: The Struggle to Control World Population. Cambridge: Belknap Press of Harvard University Press.

Cummings, Maggie
2008 The Trouble with Trousers: Gossip, *Kastom*, and Sexual Culture in Vanuatu. *In* Making Sense of AIDS: Culture, Sexuality and Power in Melanesia. Leslie Butt and Richard Eves, eds. Pp. 133–149. Honolulu: University of Hawai'i Press.
2009 Looking Good: Women's Dress and the Gendered Cultural Politics of Modernity, Morality and Embodiment in Vanuatu. Ph.D. Dissertation, York University.

Duden, Barbara
1992 Population. *In* The Development Dictionary: A Guide to Knowledge as Power. Wolfgang Sachs, ed. Pp. 146–157. London: Zed Books.

Government of Vanuatu
2010 2009 National Population and Housing Census. Port Vila: National Statistics Office.

Grace, Robert F.
2002 Population, Public Health and Tubal Ligation in Vanuatu. Pacific Health Dialog 9(1):17–20.

Greenhalgh, Susan, ed.
1995 Situating Fertility: Anthropology and Demographic Inquiry. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511621611.

Greenhalgh, Susan
1996 The Social Construction of Population Science: An Intellectual, Institutional and Political History of Twentieth-Century Demography. Comparative Studies in Society and History 38(01):26–66. http://dx.doi.org/10.1017/S0010417500020119.

Haberkorn, Gerald
2008 Pacific Islands' Population and Development: Facts, Fictions and Follies. New Zealand Population Review 33/34:95–127.

Hacking, Ian
1986 Making up People. *In* Reconstructing Individualism: Autonomy, Individuality and the Self in Western Thought. Thomas Heller, Morton Sosna, and David E. Wellbery, eds. Pp. 222–236. Stanford: Stanford University Press.

Hartmann, Betsy.
1995 Reproductive Rights and Wrongs: The Global Politics of Population Control. Boston: South End Press.

Hoehler, Sabine
2006 "Carrying Capacity": The Moral Economy of the "Coming Spaceship Earth." Athenea: A Bilingual Journal of the Humanities and Social Sciences 26(1):59–74.

2007 The Law of Growth: How Ecology Accounted for World Population in the 20th Century. Distinktion: Scandinavian Journal of Social Theory 8(1):45–64. http://dx.doi.org/10.1080/1600910X.2007.9672938.

Hugo, Graeme
2009 Best Practices in Temporary Labour Migration for Development: A Perspective from Asia and the Pacific. International Migration (Geneva, Switzerland) 47(5):23–74. http://dx.doi.org/10.1111/j.1468-2435.2009.00576.x.
2012 Our Research Makes an Impact the World, University of Adelaide, Professor Graeme Hugo. http://www.adelaide.edu.au/lifeimpactresearch/profiles/graeme.htmllast, accessed January 25, 2013.

Ittmann, Karl
1999 The Colonial Office and the Population Question in the British Empire, 1918–62. Journal of Imperial and Commonwealth History 27(3):55–81. http://dx.doi.org/10.1080/03086539908583073.

Johnson-Hanks, Jennifer
2002 On the Modernity of Traditional Contraception: Time and the Social Context of Fertility. Population and Development Review 28(2):229–249. http://dx.doi.org/10.1111/j.1728-4457.2002.00229.x.
2005 When the Future Decides: Uncertainty and Intentional Action in Contemporary Cameroon. Current Anthropology 46(3):363–385. http://dx.doi.org/10.1086/428799.
2008 Demographic Transitions and Modernity. Annual Review of Anthropology 37(1):301–315. http://dx.doi.org/10.1146/annurev.anthro.37.081407.085138.

Jolly, Margaret
1987 The Forgotten Women: A History of Migrant Labour and Gender Relations in Vanuatu. Oceania 58(2):119–139.
1991 "To Save the Girls for Brighter and Better Lives": Presbyterian Missions and Women in the South of Vanuatu: 1848–1870. Journal of Pacific History 26(1):27–48. http://dx.doi.org/10.1080/00223349108572645.
1998 Other Mothers: Maternal "Insouciance" and the Depopulation Debate in Fiji and Vanuatu, 1890–1930. *In* Maternities and Modernities: Colonial and Post-Colonial Experiences in Asia and the Pacific. Kalpana Ram and Margaret Jolly, eds. Pp. 177–212. Cambridge, MA: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511621826.008.
2001a From Darkness to Light? Epidemiologies and Ethnographies of Motherhood in Vanuatu. *In* Birthing in the Pacific: Beyond Tradition and Modernity? Vicki Lukere and Margaret Jolly, eds. Pp. 148–177. Honolulu: University of Hawai'i Press.
2001b Infertile States: Person and Collectivity, Region and Nation in the Rhetoric of Pacific Population. *In* Borders of Being: Citizenship, Fertility and Sexuality in Asia and the Pacific. Margaret Jolly and Kalpana Ram, eds. Pp. 262–306. Ann Arbor: University of Michigan Press.

Joshua, Jane
2012 Vanuatu Population to Hit Half Million by 2050. Vanuatu Daily Post, February 21. https://www.dailypost.vu/content/vanuatu-population-hit-half-million-2050.

Kertzer, David, and Tom Fricke
1997 Anthropological Demography: Towards a New Synthesis. Chicago: University of Chicago Press.

Knauft, Bruce M, ed.
2002 Critically Modern: Alternatives, Alterities, Anthropologies. Bloomington: Indiana University Press.

Li, Tania M.
2007 Governmentality. Anthropologica 49(2):275–288.

Lind, Craig
In press Why the Future Is Selfish and Could Kill: Contraception and the Future of Paama. *In* Future Selves in the Pacific: Projects, Politics and Interests. W. Rollason, ed. Oxford: Berghahn.

Malvatumauri National Council of Chiefs and Vanuatu National Statistics Office
2012 Alternative Indicators of Well-Being for Melanesia: A Vanuatu Pilot Study Project. Port Vila: Malvatumauri National Council of Chiefs.

Maternowska, M. Catherine
2006 Reproducing Inequities: Poverty and the Politics of Population in Haiti. New Brunswick: Rutgers University Press.

McPherson, Naomi
1994 Modern Obstetrics in a Rural Setting: Women and Reproduction In Northwest New Britain. Urban Anthropology and Studies of Cultural Systems and World Economic Development 23(1):39–72.
2007 Women, Childbirth and Change in West New Britain, Papua New Guinea. *In* Reproduction, Childbearing and Motherhood: A Cross-Cultural Perspective. Pranee Liamputang, ed. Pp. 127–141. New York: Nova Science Publishing.

Mitchell, Jean
2011 "Operation Restore Public Hope": Youth and the Magic of Modernity in Vanuatu. Oceania 81(1):36–50. http://dx.doi.org/10.1002/j.1834-4461.2011.tb00092.x.

Muehlmann, Shaylih
2012 Rhizomes and Other Uncountables: The Malaise of Enumeration in Mexico's Colorado River Delta. American Ethnologist 39(2):339–353. http://dx.doi.org/10.1111/j.1548-1425.2012.01368.x.

Pacific Institute of Public Policy
2011 Youthquake: Will Melanesian Democracy Be Sunk by Demography? Pacific Institute of Public Policy Discussion Paper 17. http://www.pacificpolicy.org/wp-content/uploads/2012/05/D17-PiPP.pdf.

Population and Development Program
2008 Ten Reasons to Rethink Overpopulation. http://popdev.hampshire.edu/projects/dt/40, accessed January 25, 2013.

Ramsden, Edmund
2002 Carving up Population Science: Eugenics, Demography and the Controversy over the "Biological Law" of Population Growth. Social Studies of Science 32(5/6):857–899.

Rawlings, Gregory E.
1999 Foundations of Urbanization: Port Vila Town and Pango Village. Vanuatu Oceania 70:72–86.
Razak, Iskhandar, and Graeme Hugo
2012 Population Pressure Could Cause "Melanesian Spring": Demographer. Radio Australia (ABC). http://www.radioaustralia.net.au/international/radio/program/pacific-beat/population-pressure-could-cause-melanesian-spring-demographer/1025884, accessed January 25, 2013.
Szreter, Simon, Hania Sholkamy, and A. Dharmalingam, eds.
2004 Categories and Contexts: Anthropological and Historical Studies in Critical Demography. Oxford: Oxford University Press. http://dx.doi.org/10.1093/0199270570.001.0001.
Tonkinson, Robert
1982 National Identity and the Problem of Kastom in Vanuatu. Mankind 13(4):306–315.
Ulijaszek, Stanley, ed.
2008 Population, Reproduction and Fertility in Melanesia. Oxford: Berghahn Books.
United Nations Population Fund (UNFPA)
2012a Vanuatu Country Profile. http://www.unfpa.org/public/cache/offonce/_ns/YWRleGVyby1mZC1wb3J0bGV0OjpkZXhlcm8tZmQtcG9ydGxldDo6LTYyYTZhNDI5OjEyOTk2MDgxYzg3Oi03ZmYxfGVhY3Rpb249MT12aWV3RGF0YVZpZXc_/cache/bypass/appid/310297_1/home/sitemap/countries;jsessionid=6B218035A5E34C3CD82F9EB6E9614AB7.jahia02.
United Nations Population Fund (UNFPA)
2012b Vanuatu. http://countryoffice.unfpa.org/filemanager/files/pacific/cp3.pdf.
Van Hollen, Cecilia
2003 Birth on the Threshold. Childbirth and Modernity in South India. Berkeley: University of California Press.
Vanuatu National Statistics Office (VNSO)
2012 Population Clock Outside VNSO Building. http://www.vnso.gov.vu, accessed January 25, 2013.
Vanuatu National Statistics Office, Andy Calo, Richard Curtain, Simil Johnson, Benuel Lenge, Melanie Nalau, Jimmy Tamkela
2012 Youth Monograph: Young People in Vanuatu (2009 National Statistics and Housing Census). Port Vila: Vanuatu National Statistics Office. www.vnso.gov.vu, accessed January 25, 2013.
Wardlow, Holly
2006 Wayward Women: Sexuality and Agency in a New Guinea Society. Berkeley: University of California Press.
Ware, Helen
2005 Demography, Migration and Conflict in the Pacific. Journal of Peace Research 42(4):435–454. http://dx.doi.org/10.1177/0022343305054090.
Widmer, Alexandra
2012 Of Field Encounters and Metropolitan Debates: Research and the Making and Meaning of the Melanesian "Race" During Demographic Decline. Paideuma. 58:69–93.
2013 Diversity as Valued and Troubled: Social Identities and Demographic Categories in Understandings of Rapid Urban Growth in Vanuatu. Anthropology & Medicine 20(2):142–159. http://dx.doi.org/10.1080/13648470.2013.805299.