“The Legacies of Context:

Contraceptive Choice in Nang Rong, Thailand”

Jeffrey Edmeades

PhD Student, University of North Carolina at Chapel Hill

Introduction

The role of contextual factors in influencing behavior at the individual level is widely acknowledged within sociology, featuring prominently in both classical and contemporary theories of social and demographic change. Prior research has found a variety of individual behaviors, including educational attainment, social interaction, violence, high-risk activities, and a number of demographic outcomes to be strongly related to both past and current contextual influences (Brewster *et al.* 1993; Entwisle *et al*. 1996; Degraff *et al*. 1997; Freedman 1997; Singley and Langley 1998; Axinn and Barber 2001; Axinn and Yabiku 2001; Sampson *et al*. 2002). Despite these findings, much remains unknown about the ways in which this relationship may change over an individual's life course, or in settings of rapid social or economic change. The majority of research in this area has relied on cross-sectional study designs, limiting their ability to fully examine the diversity of ways in which both contextual and individual circumstances may change over the life course of individuals.

This paper focuses on the influence that past and current household and community contexts exert on decisions regarding method of fertility control, with particular attention paid to the ways in which this changes over the life course. To examine these issues, I use individual, household, and community information collected over a period of sixteen years in Nang Rong district, Northeastern Thailand. Specifically, I examine the ways in which contraceptive behavior in 2000 is influenced by both present and past individual,

household, and community characteristics. While the contraceptive choice literature has increasingly recognized the importance of contextual factors in shaping reproductive outcomes, the ability of the majority of studies in this area to address the ways in which these play out over the life course is limited by a reliance on static research designs that are unable to fully incorporate the effects of changes at the macro-level on behavior at the individual level. As a result, relatively few studies have been able to comprehensively address the ways in which both individual and contextual changes are related over the life course, and how this influences contraceptive and reproductive behavior.

LITERATURE REVIEW

The role of individual characteristics in shaping behavior has been a persistent theme in sociological and demographic research, lying at the core of most theories of fertility change. Past research in this area predominantly has relied on a static, period specific approach to understanding the determinants of behavior that is limited in its ability to examine changes at either the individual or macro-level. Recent studies in this area have increasingly employed more dynamic research designs that focus on the interaction between individual histories and social context, and how this shapes behavior at the individual level (Axinn and Yabiku 2001; Rindfuss *et al*. 1996). This approach has proven to be particularly useful in settings where social and economic contexts are relatively fluid in structure, such as in areas experiencing rapid development.

In this research, I draw on the concepts developed by the life course perspective (Elder 1974, 1977, 1983). Two fundamental concepts outlined by this framework are particularly relevant to the examination of contraceptive choices. The first is that

behavior at any given point in time reflects both accumulated experiences and current influences on behavior, including broader contextual factors. This implies that past experiences and contexts, such as the environment where childhood socialization took place, continue to exert some influence on behavior throughout life, attenuating the effect current personal and contextual circumstances may have. Secondly, this approach explicitly acknowledges that the effect of both individual and contextual factors is contingent on the point at which individuals are in their individual life course. As individuals age, they experience events that lead them to transition to a different stage of life course, such as marriage, beginning employment, or finishing education. The transition into reproductive unions and family formation is particularly important, signaling the beginning of reproductive behavior, and marking the transition to adulthood. As individuals and couples move through the family formation process, contraceptive needs also change, moving from being focused primarily around issues of timing and spacing to being oriented primarily towards fertility limitation. This shift is accompanied by changes in the demands for different contraceptive methods, typically from temporary methods such as the contraceptive pill or condoms to more permanent methods, such as the IUD or sterilization (Rindfuss *et al*. 1996).

The Role of Context in Shaping Contraceptive Behavior

An individual or couple's choice regarding a contraceptive method is usually seen as reflecting a variety of needs and concerns. The selection of contraceptive method involves a complex decision-making process where method effectiveness, availability,

possible side effects, convenience of use, and potential social, psychic, and economic costs of controlling fertility all may be important factors. While a variety of factors may play a role in method selection, the role of context in influencing contraceptive choice is typically assumed to act through either *institutional* or *social* effects (Montgomery and Casterline 1996; Kohler and Watkins 2001).

Institutional effects both enable and constrain individual behavior through defining local opportunity structures with regard to given contraceptive methods. Within the contraceptive choice literature, these are most evident when examining the role of accessibility and availability in contraceptive choice, where the evidence suggests that these structural factors play an important role in shaping individual contraceptive decisions (Entwisle *et al*. 1997; Entwisle *et al*. 1984; Entwisle *et al*. 1996; Freedman 1997; Rindfuss *et al*. 1996; Axinn and Yabiku 2001). Social effects influence behavior primarily through defining a normative context that describes socially acceptable behaviors, either through hierarchical power structures or social institutions that delineate and enforce the social costs and benefits associated with a given behavior (Mason 1983). This implies that women in contexts where the 'contraceptive culture' is strong and use is commonplace will be more likely to adopt particular methods than those in settings where contraceptive use is less prevalent or socially frowned upon.

In this paper, I argue that current contraceptive decisions are influenced by a variety of institutional factors, both past and present. In contrast to most research in this area, I examine the role of both past and present context on current behavior, allowing an

examination of the degree to which contraceptive behavior reflects either the current environment, or the one in which socialization took place.

HYPOTHESES

On the basis of the preceding discussion, I develop two competing explanations for contraceptive behavior:

1. Current behavior reflects current needs and opportunities: The shifts in contraceptive needs associated with progression through the life course and changes in the social and institutional environment within with contraceptive decisions are made overwhelm any preferences associated with past conditions. If this is the case, current characteristics, such as parity, age, or accessibility to contraception will be particularly powerful predictors of current behavior.
2. Current behavior reflects preferences developed at some point in the past: Contraceptive behavior will continue to be influenced by past conditions, regardless of the changes that have taken place in terms of the social and institutional contraceptive environment. In this case, past household and community characteristics, such as previous socioeconomic position and the prevalence of contraceptive use, will continue to be important despite changes in current context.

DATA AND SETTING

The data used in this paper come from a series of linked surveys as a part of an ongoing project in Nang Rong, a small, largely urban district in Northeast Thailand[1]. The past three decades have also been a period of a remarkable transformation in the region's demographic behavior. The northeast has historically had among the highest fertility rates in the country. However, as has been the case for Thailand as a whole, the past three decades have seen remarkable declines in fertility. In the late 1960s, estimates suggest a fertility rate of well over seven births per woman (Knodel *et al*. 1987). By 1989, estimated fertility was 2.19 (Hirschman *et al.* 1994), a decline on par with that experienced by the country as a whole. By 1996, this had declined further to 2.11, still the highest fertility of any region in Thailand (Chamratrithirong *et al*. 1997). Accompanying this rapid change were sharp increases in contraceptive use and knowledge throughout both rural and urban areas (Knodel *et al*. 1987). In the northeastern region, current use among currently married women aged 15-44 increased from reported levels of 46 percent in 1978/1979 to over 70 percent by 1996 (Chamratrithirong 1998:5). Mirroring these shifts have been significant changes in attitudes towards ideal family size, with the emergence of a preference for a two child family with one child of each gender, a pattern that is evident throughout Thailand (Knodel *et al*. 1996; Guest 1999).

Data was collected on all individuals in all households in 51 study villages in 1984, 1994, and 2000. In each subsequent wave of data collection, efforts were made to identify

[1] For more information on this project, see http://www.cpc.unc.edu/projects/nangrong_home.html.

households and individuals for whom information had been gathered in previous waves, resulting in a longitudinal dataset covering 16 years. In each of these stages of data collection, information on contraceptive behavior was collected from married women of reproductive ages. The data used in the paper comes from a subsample of 1691 currently married women aged 18-41 for whom information was available in each wave of data collection, and who were using a non-permanent method of contraception. This allows me to examine the influence of both current and past contexts on current contraceptive behavior.

I include a number of measures of present and past context at both the household and community that may influence contraceptive choice, in addition to a number of current individual level factors. In keeping with the life course approach, I include both age and parity, key indicators of position in the family-building life cycle. In addition, I include both occupation and education level, both of which have been demonstrated to influence contraceptive behavior. At the household level, I include two measures of household socioeconomic status: the first is a measure of household wealth developed from an asset-based index, and the second is the educational level of the household head. These variables may influence contraceptive choice in contradictory ways. On one hand, wealthier households may have less incentive to limit childbearing, and therefore be less likely to use contraception. On the other hand, individuals from wealthier households may have greater access to contraception, therefore implying they may be more likely to use contraception.

I include a number of community level variables designed to determine the degree to which either social or institutional constraints on behavior may influence behavior. These include the presence of a primary and/or secondary school in the village, the percentage of the working age population with a non-agricultural occupation, the percentage of teenagers aged 13-18 not in the labor force, and the distance from the village to the nearest health center or hospital.

METHODS

In order to examine the ways in which contraceptive behavior is influenced by both past and current factors, I use data from each of the three waves of data collection described above. The dependent variable in both the 1994 and 2000 models is an unordered categorical variable consisting of four categories: not currently using contraception in 2000; using the contraceptive pill; using injection; and using a further contraceptive method, including condom, IUD, withdrawal, and rhythm methods. As noted by Rindfuss *et al*. (1996:348), it is appropriate to include a category for nonuse of modern contraception, as issues such as cost, convenience, and potential health effects make this a viable choice in this context, despite the risks that this entails in terms of unintended pregnancy. I use multinomial logistic regression to estimate the effects of individual, household, and village characteristics on contraceptive method selection.

In order to capture the ways in which both past and current context may influence contraceptive choices, I include three separate statistical models: the first includes

individual, household, and community level influences in 2000, while the second and third include 1994 and 1984 household and community level variables in addition to current individual characteristics.

PRELIMINARY RESULTS

Table 1 shows the results from multinomial models of contraceptive choice. These preliminary results suggest that while current individual characteristics exert considerable influence on contraceptive choice, past household and community level characteristics also play an important role. As predicted by the life course arguments, age and parity are especially important for contraceptive choice. However, this effect is mediated by the influence of past context. This is particularly true for the 1994 household and community characteristics, suggesting an important role for past environmental factors. This suggests that contraceptive models that focus exclusively on either past or current influences on contraceptive choices overlook an important aspect of the relationship between contextual factors and individual behavior.

Table 1. Preliminary Analysis of Determinants of Contraceptive Choice

Variable		Pill vs. Injection	Pill vs. Other	Pill vs. Non-Use	Pill vs. Injection	Pill vs. Other	Pill vs. Non-Use	Pill vs. Injection	Pill vs. Other	Pill vs. Non-Use
Individual Characteristics		*Individual Characteristics in 2000*			*Individual Characteristics in 2000*			*Individual Characteristics in 2000*		
Age	25-29	-0.26	0.58	0.49	-0.28	0.64	0.53	-0.26	0.63	0.53
	30-34	-0.21	1.00*	0.61*	-0.18	1.04*	0.66*	-0.22	1.04*	0.67*
	35-41	-0.25	1.84**	1.00**	-0.17	1.99**	1.09**	-0.25	1.95**	1.09**
Occupation	Non-Agricultural	-0.36	-0.32	0.30	-0.26	-0.37	0.31	-0.34	-0.31	0.33
	Not in Labor Force	0.35	0.06	0.70	0.46	0.02	0.68	0.36	0.19	0.73
Parity	0	-1.50**	-1.20	2.20**	-1.52**	-1.32	2.17**	-1.53**	-1.27	2.19**
	2 +	-0.05	-0.24	-0.61**	-0.04	-0.18	-0.59**	-0.06	-0.20	-0.61**
Education	Primary	0.31*	0.25	0.18	0.32*	0.46	0.29	0.36*	0.49	0.32
	Primary +	0.08	0.38	0.35	0.18	0.80*	0.54	0.14	0.85*	0.57*
Household Characteristics		*Household Characteristics in 2000*			*Household Characteristics in 1994*			*Household Characteristics in 1984*		
Wealth	Poor	0.01	-0.42	-0.02	-0.02	-0.31	0.00	-0.02	0.01	-0.04
	Rich	0.32	0.61*	0.42**	-0.01	-0.10	0.19	-0.26	0.02	-0.20
Education	Primary	-0.01	0.24	0.13	0.21	0.30	0.09	0.15	0.09	0.02
of HH head	Primary +	0.15	0.60	0.28	0.42	0.95*	0.09	0.00	0.37*	-0.01
Community Characteristics		*Community Characteristics in 2000*			*Community Characteristics in 1994*			*Community Characteristics in 1984*		
Has Primary School		-0.05	0.15	0.15	0.10	0.31	0.31	0.73	1.12	-0.08
Has Secondary School		-0.49	-0.72	-1.04	-0.65**	-1.32*	-0.55*	0.22	-0.22	-0.24
% with Non-Ag. Occupation		0.00	-0.05*	-0.01	-0.03*	0.00	-0.01	-0.04	0.02	-0.02
% of 13-18 Not in Labor Force		0.01	0.00	0.01	0.01	0.01	0.01	0.01	-0.01	0.01
Distance to Health Center (km)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distance to Hospital (km)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00*	0.00
No. of observations		1691								

*Coefficient significant at the 0.05 level; **Coefficient significant at the 0.01 level

Reference categories: Age (18-24); Agricultural Occupation; Parity (1-2); Less than Primary Education; Middle Class; Less than Primary Education of HH head

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