

FORMS OF PRODUCTION AND DEMOGRAPHIC REGIMES: AN
ANTHROPOLOGICAL DEMOGRAPHIC STUDY OF BEDOUIN AGRO-PASTORAL
TRIBES IN THE BEKAA VALLEY, LEBANON

by

SUZANNE EZZAT JOSEPH

(Under the direction of Alexandra Avril Brewis)

In order to explain the timing and patterning of demographic transitions, studies are needed in societies either currently undergoing transition or where fertility remains high and unrestricted. This dissertation provides an anthropological demographic and ethnographic study of Bedouin agro-pastoral tribes in the Bekaa, which exemplify both these features. That is, fertility is high and unrestricted by widespread contraceptive use (completed family size is 8.9; $n=65$); although there is evidence of recent fertility decline (total period fertility rate is 5.5; $n=224$). It is among the first anthropological demographic studies in the Middle East. To provide a historical portrait of Bedouin fertility, indirect estimates of completed family size were derived from interviews with 160 older informants about their post-reproductive mothers' fertility histories. Very high fertility—over eight live births—is seen among women born between 1934-1960—a period that coincides with the commodification, peasantization, and proletarianization of the Bedouin economy. Focus on the proximate determinants shows high fertility is due to early weaning and marriage, low rates of marital instability, and low incidence of primary sterility. Low infant mortality rates (53/1000) and child mortality rates (16/1000) are due to access to high quality weaning foods and safe birthing and maternal care practices.

Previous political economic research from historical Europe as well as Iran and Nepal suggests the centrality of class formation and caste stratification in understanding demographic variation and change. While class divisions and fertility differences are present between land-poor Bedouin tribes and Lebanese landowning peasants in the Bekaa, class stratification is not seen in social relations of production within Bedouin society. Furthermore, major household forms of production—sharecropping, pastoralism, and wage labor—do not differ in their associated fertility or mortality patterns. The internal demographic structure of Bedouin society parallels the internal egalitarian social structure and cultural ideology. Intrasocietal differences in fertility are largely due to

physiological mechanisms, particularly differences in age-specific sterility among married women. High total population fertility levels and rising historical fertility levels are associated with greater participation in agriculture among the Bekaa Bedouin. Taken together, these findings reinforce the importance of scale in explaining demographic change.

INDEX WORDS: Anthropological demography, Ecological/Environmental anthropology, Political economy, Demographic transitions, Pastoralism, Modes of production, Middle Eastern ethnology, Bedouin

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DEDICATION

To my mother-in-law, Deebie, this dissertation is yours and mine.

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PREFACE

Demographic regimes and their transformations have important impacts on all facets of society, from when and who we marry, how we pace childbearing, and how natural resources are utilized through the production process. One of the most important revolutions in social life over the past two centuries is the demographic transition. As a result of the historic decline in fertility and mortality, many couples have ceased to devote a large portion of their adult lives to childbearing and childrearing, and according to many are able to enjoy greater economic prosperity as a result. However, this sociodemographic revolution seems to have left some of the poorer countries of the world behind.

Livi Bacci (1997) points out that in about a century—by 2100—the poor countries of the world will have already matched the expansion of the rich countries in the two centuries following the Industrial Revolution (p. 159). Many see such extraordinary growth as a negative force, which threatens the world's limited resources. However, more than just being a negative force, Malthusians and neo-Malthusians explain overpopulation as the “natural” plight of the poor, whereas Marxists have pointed to the ways in which exploitative political economies create not only an imbalance in economic well-being but in demographics as well.

Malthus (1989) deduced his law of population from *a priori* universal principles: specifically, that food is essential to human existence and that the passion between the

sexes is constant. He then introduces the notion of a world with fixed or finite resources and formulates his famous “natural law” in which population (with its geometric) growth places pressure on the means of subsistence (with its arithmetic expansion) inevitably producing poverty, disease, hunger, war and a general tendency towards “overpopulation”. While Malthus was content to attribute the plight of the poor to the “natural law” of population (although Malthus (1989) did recognize that “laws of private property” played a role in the misery of the lower classes), Marx’s (1967, 1973) explanation recognizes socially and historically specific “laws” of population.

Thus, according to Marx, poverty and misery were due to the crisis tendencies (related to the internal dynamics) of the capitalist mode of production. In other words, the workings of laissez-faire free-market capitalism are responsible for poverty and malaise, not the rate of population growth (Harvey 1996: 145). Moreover, the specific population regime under capitalism results in the need to produce an industrial reserve army (i.e., a relative surplus population) in order to fuel the exploitative expansion of capitalism. But perhaps even more importantly Marx (1973) states:

In different modes of social production there are different laws of the increase of population and overpopulation... Thus, what may be overpopulation in one stage of social production may not be so in another, and their effects may be different... Overpopulation and population taken together, are the population which a specific production basis can create (pp. 604-605).

Thus, Marx, as early as 1857-8, laid the initial foundations for rejecting simplistic economic or ecological scarcity arguments and thus paved the way towards more spatially and historically contingent political economic analysis.

This dissertation is an attempt to go beyond Malthusianism and neo-Malthusianism in order to understand population dynamics in time and space. Neo-Malthusianism has had profound implications for the perceptions of poor peoples in the colonial world and in modern society. Under modern dismal scientific discourse, the marginalisation of the propertyless—especially nomadic groups—is justified on the grounds that as poor people they are moral threats to “civilized” society and to the environment itself. As Laughlin (1999) maintains, current streams of scientific thought are frightening in their convergence on the idea that in order to solve the world’s population “problem” society must exert greater control over the wombs of the poor, particularly those in the Third World.

A more balanced and anthropologically informed demography must move beyond dismal and moralizing demography and attempt to understand the complex interplay between demography, society and nature. Central to this aim is the need to understand the interrelationship between demographic change (including fertility transitions) and processes of class formation, nationalism and ethnic chauvinism, which are closely tied to the evolution of capitalism. This dissertation hopes to contribute to our understanding of the relationship between forms/modes of production and demographic regimes in time and space.

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**PART I: CULTURE AND POLITICAL ECONOMY OF BEDOUIN TRIBES
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CHAPTER 1: RESEARCH QUESTION AND METHODOLOGY

Section 1.1 Research Question

Introduction

One of the most important social transformations in human history has been the decline of mortality and fertility across various parts of the globe over the last century and a half. This process is referred to as the demographic transition. Demographic transition consists of three major phases: pre-transition (a historical period of long-standing equilibrium of high mortality and fertility), transition (a period of disequilibrium in mortality and fertility) and post-transition (a period of near equilibrium characterized by low mortality and low fertility).

In most of Europe, the transition largely occurred between 1870-1960. At the beginning of the 1960s, the world demographic landscape seemed to be stable; the total period fertility rate (TPFR) of more developed countries was 2.7, while that of less developed countries was 6.0 (Chesnais 2001). Most variation was along a North-South hemisphere trajectory. Japan and parts of Central, Eastern, and Northern Europe had a TPFR of 2.5. A few Southern Hemisphere countries of European descent (Argentina, Australia, New Zealand, and Uruguay) had moderately high fertility with TPFRs from 2.5 to four. However, the large majority of countries from Latin America, Africa and Asia maintained very high levels of fertility (above 6.5) (Chesnais 2001).

By 1990-95, some three decades later, fertility transition became a global phenomenon. Low fertility countries (TPFRs below 2.5) now included Russia, all of

Europe, Northern America, Australia, New Zealand, China, Thailand and Brazil (Caldwell 2001; Chesnais 2001). Only two regions remain with high fertility (above 5.5): sub-Saharan Africa and the Middle East. But even in these two cases, countries with very high fertility (above 6.5) are largely limited to Yemen, the Sahel zone, and politically unstable zones of Africa. A major challenge for anthropological demographic theorizing is to provide explanations of high and falling fertilities in their global, national and local historical varieties.

Recent research from the political economy of demography has highlighted the class-specific pattern of demographic transitions in Europe. Political economic researchers have found that episodes of class formation closely coincide with differential demography of emergent classes (Kertzer and Hogan 1989; Schneider and Schneider 1996). Their research illustrates how different classes living in the same place experienced distinct fertility declines—distinct both in their timing and politico-economic causality. Such processes of class formation in Europe are strongly tied to boom and bust cycles of capitalist developments in agriculture and industry beginning in the late eighteenth and nineteenth centuries (Schneider and Schneider 1996: 8).

Outside of Europe, there has been very little anthropological demographic research on the role of class in demographic transitions. Because class divisions under the capitalist mode of production are absent in many societies with noncapitalist economic formations, the role of local *forms of production* on demography are often examined instead. *Forms of production* are defined as social relations and forces of production that characterize households within a community. Forms of production are not entirely subsumed by broader modes of production (see below). Social segments in noncapitalist

societies that share a basic set of relations to the productive forces, may under certain socio-historical conditions develop into distinct class groups (Friedman cited in Glavanis and Glavanis 1989), but such groups should not simply be seen as social precursors of class.

Research Question

Understanding the role of social class and forms of production in shaping the demographic regimes of nonWestern societies at various stages of demographic transitions is crucial to developing a more synthetic understanding of demographic behavior in time and space. For the purpose of conceptual clarity: "Demographic regime" is defined as a property of all societies and includes a system of regularities in the timing of marriage, fertility, breastfeeding, relations of age, gender and kinship, childrearing customs, emigration and immigration, and in property transmission (Kreager 1986; Schneider and Schneider 1996:196-197).

The central aim of this project is to determine, in a nonWestern agropastoral society where fertility is relatively high and unrestricted whether different forms of production have their own demographic regimes. By examining whether demographic differences are a normal corollary of forms of production, it is possible to understand the articulation between modes of production and demographic processes at various stages of transitions. Again, the expression "demographic transition" encompasses several phases of modern population change, from high fertility and high mortality through a phase of destabilization and rapid growth to the barely replacement and below-replacement birthrates widespread in the late twentieth century in most parts of the developed world.

Szreter (1996) argues that most theoretical explanations of historical demographic transitions are incomplete and consist largely of post hoc rationalizations of change. More convincing explanations (or attempts to critically evaluate competing or complimentary theories) of demographic change require long-term studies in populations around the world that are either currently undergoing transition or where fertility remains high and unrestricted (Szreter 1996: 444).

The next two subsections provide a general background on anthropological demography and the current status of political economic research on the relationship between class and demographic regimes. An evaluation of the two major paradigms that have been proposed to account for class-specific demographic change: modernization theory and political economy will also be discussed.

Political Economy of Demography As Part of Anthropological Demography

The links between anthropology and demography go back further than the actual christening of the field of Anthropological Demography in the mid-1990s (see Fricke and Kertzer 1997; Greenhalgh 1990,1995). The road towards an integration of demography and anthropology was paved around the 1970s by demographers, led by Caldwell and Caldwell, who began showing marked interest in anthropological field methods and techniques such as participant observation, detailed descriptions of ethnographic cultures, and local/micro-case studies (Caldwell 1982; Caldwell, Reddy and Caldwell 1987).

The fusion of anthropology and demography has simultaneously involved anthropological borrowing of conceptual tools from demographic analysis. A major development in the field of anthropological demography has been the incorporation of the

proximate determinants framework in the study of fertility. Initially developed by Kingsley Davis and Judith Blake (1956), the proximate determinants framework was popularized by Bongaarts (1976, 1978, 1982) and more recently revised to emphasize physiological determinants by biological anthropologists Campbell and Wood (1988) and Wood (1990).

The proximate determinants framework provides only a partial theory of fertility. The framework specifies the biocultural mechanisms that may potentially impinge upon the number of live births. Bongaarts and Potter (1983) identify six proximate determinants of natural fertility: 1) postpartum infecundability (the duration in which the postpartum return of ovulation and menstruation is delayed following birth. The length of this period largely depends on breastfeeding. However, postpartum sexual taboos can further lengthen the duration of this period); 2) the waiting time to conception (the period from the first postpartum ovulation to the next conception. Its duration largely depends on the frequency of intercourse and fecundity. Fecundity, the probability of conception during a month of exposure to unprotected intercourse, is affected by the frequency of ovulation, the duration of the fertile period, and the duration of viability of sperm); 3) intra-uterine mortality (the number of pregnancies that prematurely end in miscarriages or spontaneous abortions and stillbirths, which can, in turn, lengthen the interval between births); 4) permanent sterility (the proportion of men and women in sexual/marital unions at each age who are sterile in the population); 5) entry into the reproduction span (the age at menarche and age at marriage. The latter affect the age at which women begin childbearing); and 6) contraception and induced abortion.

In a sensitivity analysis of the proximate determinants of fertility in 70 natural fertility populations, Campbell and Wood (1988) show that most of the interpopulation variation in fertility is due to the duration of lactational infecundability and secondly to the age pattern of marriage (p. 49). Campbell and Wood (1988) caution that their analysis provides examination of the most important proximate determinants at a highly aggregated level or across all natural fertility populations. Such analyses tell us little about the proximate determinants within populations or determinants between individuals within populations.

Bongaarts (1993) also breaks down the proximate determinants into biological and behavioral factors. Behavioral factors refer to age at marriage, the duration of postpartum infecundability (due to breastfeeding and abstinence) and the frequency of intercourse. Biological factors, on the other hand, refer to the age at onset of sterility, intra-uterine mortality and the biological risk of conceptual failure. Using a mathematical model to determine whether biological or behavioral factors are more important in explaining fertility variation in ten natural fertility populations, Bongaarts (1993) determines that behavioral factors are twice as important as biological factors in explaining fertility variation in developing countries (p.11), supporting the findings of Campbell and Wood (1988).

The utility of the proximate determinants framework for anthropological demography lies in the recognition that childbearing is a causally complex process that requires attention to both proximate mechanisms or the “hows” of reproduction and broader social processes/constraints or the “whys” of reproduction (see Ahl and Allen 1996). Examination of the proximate determinants is not intended to be reductionistic

(James Wood, personal communication), but to provide more complete hierarchical explanations for reproduction (see Chapter 5).

Attention to biocultural complexity and the proximate mechanisms of fertility can be seen in the two major subfields within anthropological demography: political economy and reproductive ecology. Political economy of demography is the study of micro-demographic behavior in the context of local and broader structures of social life (Greenhalgh 1990). Reproductive ecology can be defined as the study of the relationships among human procreative decisions, fecundity, fertility and the biotic and abiotic conditions surrounding humans (Campbell and Wood 1994; see also Ellison 1991,1995). One of the major contributions of reproductive ecology to anthropological demography has been to establish that the length of postpartum infecundability largely reflects patterns of breastfeeding (Jain et al. 1979; Chen et al. 1974; Huffman et al. 1980) and that the duration of lactational infecundability is largely due to suckling frequency (McNeilly 1993).

Reproductive ecology incorporates aspects of evolutionary theory and history for understanding reproduction (Ellison 1991,1995). Questions in reproductive ecology center on the relationship between energetic stress and fecundity/fertility (Bailey et al.1992; Panter-Brick et al. 1993; Ellison 1991, 1995; Pennington 1992; Rosetta 1995); age and fecundity (Doring 1969; Menken et al. 1986); disease and fertility (Belsey 1976; Caldwell and Caldwell 1983; Frank 1983; Pennington and Harpending 1991; Bailey and Aunger 1995); seasonality and fertility (Becker et al. 1986; Huffman et al. 1980; Lam and Miron 1987; Brewis et al. 1996; Ellison 1991, 1994, 1995; Rosetta 1995); and mode of subsistence and fertility (Campbell and Wood 1988; Bentley et al.

1993; Sellen and Mace 1997; Sellen and Smay 2001).

Political economy is largely concerned with how cultural and political economic processes in history have shaped micro-reproductive behavior. One of the major contributions of political economy to anthropological demography has been to challenge Eurocentric theories of modernization in the study of fertility decline (Kertzer 1992; Kertzer and Hogan 1989; Schneider and Schneider 1996). Theoretical efforts in political economy have centered on understanding the historical causes of high and declining fertilities. The next section examines the current status of research on the political economy of demographic transitions.

Current Status of the Research on The Political Economy of Demographic Transitions

By the early twentieth century, there was widespread international recognition by officials and social scientists that a process of fertility decline had occurred in many of the economically well-off countries in the world. In fact, it is now clear that both within Austro-Hungary and France there had been substantial reduction in the birth rate in certain rural quarters from the late eighteenth century, while some aristocratic and bourgeois groups displayed reduced marital fertility in the previous century. Other pockets of early fertility decline included the Italian Jews and the bourgeoisie of Geneva (Watkins 1986). Nevertheless, for the rest of Europe, the transition occurred between 1870 and 1960. The transition thus occurred in a relatively brief period of time and for the most part followed a trajectory of west to east and north to south (relative to its early initiation in France) (ibid.).

A major pattern or confirmed generalization of demographic transitions in Europe is the presence of class distinctions in the process of demographic transitions. Haines (1992) summarizes the methodological difficulties faced by statisticians measuring social class from census data that at best keep track of male occupations and then only episodically. Haines finds that although there is variation in the extent and timing of the gaps that characterized the fertility declines of several European countries, class differentials still emerge as central to the overall process of transitions.

In particular, Haines (1992) found that class fertility differentials, while minimal at the onset of fertility transition, begin to increase during the early stages of fertility decline in England, France, Norway, Germany, Japan and the US. Salaried employees, owners, managers, proprietors, and professionals typically began to reduce their family size early on; while agricultural and industrial wage laborers, miners, sailors, and fisherfolk began to exhibit prudential fertility behavior at a later time. It seems that upper and middle classes began their early fertility control within marriage mostly through coitus interruptus (Santow: 1993) and abstinence (Santow 1993; Szreter 1996).

Recent historical demographic research by the Schneiders (1996) in Sicily and that of Kertzer and Hogan (1989) in Italy supports the findings of Haines (1992), namely that there are class differentials in fertility decline with upper and middle classes beginning family limitation sooner than other social groups. Specifically, their research found reveals that the fertility of the elite declined first, followed by that of artisans, merchants, and wage earners later in the nineteenth century (Kertzer and Hogan 1989; Kertzer 1995; Schneider and Schneider 1996).

Attempts in the social demographic literature to explain class-specific demographic change have been dominated by modernization theory. That is, much of the literature on fertility decline cites economic growth, urbanization, and industrialization as the sources of the revolutionary changes in family size (Watkins 1991). It is argued that culturally sanctioned costs of childrearing must rise substantially in any society experiencing economic development.

Under development, members of upper and middle classes who were often the first to curtail their reproduction are viewed as responding with “modern” “rationality” and “individualism” to the economic stimuli of the market. Conversely, the lower classes are viewed as more archaic or “traditional” in their economic behavior. Through a passive process of diffusion or through imitation, however, they eventually “catch up” and begin exhibiting more “rational” “individual” and “secular” values.

The conventional definition of economic development requires a pronounced overall rise in the quality of human capital inputs in order to sustain an economy’s transformation towards an increasing preponderance of high-value secondary and tertiary (service) sector activities. Variations of this explanation are widespread in the social science literature on population change and favored by micro-economists who argue that with economic development comes a rise in individual consumption opportunities and individual aspirations resulting in the increasingly competitive allocation of scarce parental resources of time and money between childrearing and consumption activities, thereby forcing fertility downward (Becker 1960, 1981; Leibenstein 1980).

As Szreter (1996: 36-37) reminds us, even Caldwell’s (1982) “inter-generational wealth-flows” model displays more than just the lingering influences of modernization

theory. The model states that if parents are the net beneficiaries of wealth generated by their children's labors, so that parent's status, prestige or authority is enhanced, this favors high and relatively unrestrained fertility. Conversely, if the net flow of wealth is upset or reversed, then lower fertility would be favored instead.

Caldwell and Caldwell (1987) argue that mass education has been the key to disrupting the flow of wealth in modern Nigeria and in both historical Australia and Britain. However, the latter argument is contradicted by the research of Caldwell, Reddy and Caldwell (1988) in India and Kertzer and Hogan's (1989) research in Italy. This leads Szreter (1996) to conclude that concepts such as "diffusion" and "modernization" or "westernization" (Caldwell 1982) that have been proposed to account for demographic transition, are largely inadequate. Attempts to reduce the explanation of fertility declines to a single specific cause are inconsistent with the thrust of the most valuable, detailed anthropological fieldwork in this area, particularly culture and political economic research (see below).

Szreter (1996) convincingly argues that the modernization thesis is not the causal proposition it may appear to be, but is rather a post hoc observation of the minimal changes in human capital formation and consumer expenditure necessary for a particular conventional definition of economic development to occur (p. 444). Thus, modernization-style explanations of transitions largely entail specifying the necessary causation involved in economic development, rather than specifying cultural-historical conditions essential for falling fertility (ibid.). Szreter (1996) identifies historical examples of widespread fertility control in late eighteenth and early nineteenth-century agrarian rural France and Hungary as empirical confirmations of the fact that increased

economic opportunity for the individual is not a necessary part of a general explanation for the origins of falling fertility in a society, although economic growth appears to be necessary to the maintenance of low fertility over the long-term (ibid.).

Conceptually more sophisticated understandings of demographic transitions are beginning to develop within anthropological demography. Specifically, current approaches to the study of demographic variation and change have begun to employ a more historically, culturally and politically contextualized approach to the study of demographic variation and change - that of political economy (for examples in anthropology see Coleman 1983; Collins 1983; Netting 1981; Schneider and Schneider 1984,1996; Kertzer and Hogan 1989; Kertzer 1998; Cleveland 1986; Simonelli 1986; Handwerker 1989; Greenhalgh 1992; for examples in social history see Tilly 1973, 1984; Levine 1984, 1987; Shorter 1975; Gillis 1984; for examples in sociology see Tilly and Scott 1978; Lesthaeghe 1980; Lesthaeghe and Surkyn 1988; Hout 1980; Ward 1984; Nolan 1988; for examples in demography see McNicoll 1980,1984,1986; Cain 1981; Potter 1983).

A political economy of demography calls for economic analysis beyond the local system (Roseberry 1989; Wolf 1990) in order to understand micro-reproductive behavior (Schneider and Schneider 1990; Greenhalgh 1990). That is, it "directs attention to the embeddedness of community institutions in structures and processes, especially political and economic ones, operating at regional, national and global levels, and to the historical roots of those macro-micro linkages" (Greenhalgh 1990:87). The study of population dynamics as both cause and consequence of other processes of large-scale structural change are central to this framework.

One of the most important research findings on population variation and change lies in dispelling the notion of a single unitary process of fertility decline. The work of anthropological historical demographers Kertzer and Hogan (1989) and the Schneiders (1996) challenges modernization-transition theories which attribute fertility declines to the trickling down of new ideas and techniques from groups higher in a social hierarchy to those lower on the social scale. Their research provides a detailed historical depiction of how different classes living in the same place experienced distinct fertility declines—distinct in terms of the timing and the direct politico-economic causes and goals involved.

Their work refined the findings of the European Princeton Project that whole regions undergo demographic transition simultaneously by revealing how four temporally discontinuous fertility transitions occurred within the same local community. Their research helped demonstrate how different classes in the same community respond (in terms of their reproductive behavior) in different ways to broader social-political and economic changes. Political and legal forces of change were shown to be pivotal components of demographic change in both settings.

For example, Kertzer and Hogan (1989) found that in the northern Italian town of Casalecchio, proletarian families continued to have large numbers of children until the costs of children were raised by changing political-economic structures. Specifically, during the second half of the nineteenth century, the disappearance of service as an early life stage increased the costs of children by extending their stay in the parental household (p. 179). Likewise, compulsory school-attendance laws and the passage of increasingly restrictive labor laws regulating children's factory work reduced the economic value of children, leading to family limitation among the

proletariat (ibid.). Schneider and Schneider (1996) similarly point to the importance of broader political economic forces in understanding micro-reproductive variation and change.

In explaining the fertility transition among artisans, Schneider and Schneider (1996) argue that currency devaluations, the depression of the inter-war years and restrictions on migration to North America had a major impact on the overall social, economic and reproductive lives of artisans (pp. 220-222). Ultimately these historical processes altered the practice of apprenticeship, which was crucial to artisans who expected their male children to follow their example since “Shoemakers make shoemakers, carpenters make carpenters,” and so on (Schneider and Schneider 1996: 220). While sometimes boys acquired skills from their fathers, more often they were apprenticed to other craftsman. Apprentices earned no income and their specialized training often required expensive trips to Palermo. With the depression and the cessation of out-migration to North America, apprenticeships became an increasing burden, particularly as adult employment prospects looked bleak (ibid. 221). As a result, artisans began to embrace the idea of “the small, early-stopping family” so as to be able to provide children with respectable economic opportunities for their class in spite of economic hardships. Artisan families were also concerned with safeguarding a precious resource-in this case skills rather than land- that a growing class of “beggars” did not possess. The alternative was to lose one’s livelihood, respected social position, and cultural identity (Schneider and Schneider 1996: 222).

Political economy also provides important explanations for demographic transitions to rising fertilities. For example, Alexander (1986) shows how the high

demographic increase in nineteenth and twentieth century Java is related to colonial pressures which removed men from subsistence agriculture to work on Dutch sugar plantations. With the removal of men from subsistence agriculture, women had to intensify their labor in the rice paddies of their village (and sometimes on plantations as well), which had the unintended consequence of destabilizing women's traditional patterns of intensive breast-feeding and associated long intervals between births. The exploitation of indigenous labor under colonialism was thus a major impetus behind fertility increase in Java and key to understanding the demographic regime of local communities during this time.

These examples illustrate that there are similarities between modernization theory and political economy. For instance, both perspectives examine the costs and benefits of children. Kertzer and Hogan's (1989) argument in particular certainly incorporates economic models of reproductive behavior. That is, parents are said to calculate the desirability or not of taking steps to have an *n*th child. However, there are two *major* differences between the two perspectives. First, modernization theory, does not concern itself with how individual decisions are constrained or influenced by historically and culturally contingent political economic processes. In political economy, economic rationality itself is not taken as a given or a timeless feature of human behavior, but a historically and culturally contingent form of social action.

Second, modernization theory does not concern itself with the role of institutions (cultural and political economic) in constraining human behavior. Emphasis on structure entails viewing human behavior as more than simply the consequence of rational or conscious individual strategizing or decision-making. The example by Alexander shows

how a change in reproductive behavior does not necessarily entail a conscious or 'rational' decision to maximize childbearing, but may be the unintended consequence or by-product of changes in breastfeeding practices under Dutch colonialism.

It is important to remember that most research on the relationship between class and fertility (with the exception of the Java example) has focused on Europe where high quality historical sociodemographic data is abundant and where capitalist processes of class formation are well-developed. According to Marx (1967), the capitalist mode developed historically when monetary wealth was enabled to purchase labor. For labor power to be offered for sale in a market, the tie between producers and the means of production (tools, resources and land) has to be severed for good. Thus, the holders of wealth must be able to acquire the means of production and deny social access, except on their own terms, to all who want to operate them.

Those who are alienated from the means of production must bargain and compete for such access. In return for their labor, alienated workers receive wages to sustain themselves. The owners of the means of production hire labor because laborers produce more than what is required to cover their wages. Through the course of the work day, the laborer produces a surplus beyond the costs of their wage. This surplus, under the capitalist mode, belongs to the capitalist owner of the means of production. The greater the amount of surplus production, the greater the rate of profit for capitalists.

The capitalist mode is necessarily based on a division of classes. It creates a division between segments of the population who produce surpluses and segments of society who control the means of production. At the same time, classes are differentiated internally. As groups compete to boost labor productivity and profits, the owners of the

means of production become increasingly differentiated. Such internal class differentiation is related to capitalist drive to seek new sources of surplus production either through cheap labor or by replacing costly labor with machines.

However, Marx recognized that different societies have different modes of production with unique historical trajectories. Mode of production has two basic components: the forces or technical means of production and the social relations of production. The means of production include land and raw materials—labor, tools, equipment and facilities, knowledge and techniques, and task organization. The relations of production are the social relationships that give people access to the means of production or to the products themselves (Marx 1970). Every society has a dominant mode of production that affects all other types of production relations in the society and limits the development of the means of production (Marx 1970).

But as Friedman (see Glavanis and Glavanis 1989) and Kelley (1994) point out, every society also has various internal forms of production or production systems. These forms of production each have a complex of means and relations of production by which a group produces a particular item. All such forms are part of broader mode(s) of production but are not completely subsumed by them. By establishing the range of variation in the relationship between production systems and reproduction at various points in time and space, a better theoretical understanding of how sensitive reproductive change (including fertility transition) is to local and broader noncapitalist and capitalist relations and forces of production can be attained.

What is the role of class relations of production or other forms of social stratification in understanding demographic variation and change in nonWestern societies

other than Java? Caldwell and Caldwell (1977) in their research in Nigeria only briefly discuss how the urban elite were the first to curtail their fertility within marriage. They also examine urban-rural differences as opposed to differences at the local community level. Demographic regimes, at the local community level, are examined by Folmar (1992) in his research in West Central Nepal. Specifically, Folmar (1992) finds pretransitional fertility differences among three distinct caste groups, the elite large-farm high castes, the small-farm high castes and the low castes. The elite status group, the large-farm high castes, have the highest fertility with 6.4 children ever born to women of post-reproductive age. The small-farm high castes have the lowest fertility prior to transition at 3.4 (Folmar 1992: 236). Women in the small-farm high castes group delay their first births (due to cultural practices of separation following marriage, which last up to two years), space births farther apart, and terminate reproduction at an earlier age than the other two groups (ibid.). The low castes have recently begun to limit their fertility using modern contraception, as have small-farm high castes; however, fertility among the elite large-farm high castes remains high and unrestricted (ibid.).

Class (as opposed to caste) differences in demographic behavior at the local level have been found among peasant pastoralists. Bradburd (1981) has argued that because today's nomadic populations are integrated into regional, national, and global systems, "we should therefore expect nomadic societies to show many of the same features of the transition to capitalism as other agrarian (previously) precapitalist systems" (p. 136). Indeed, research among pastoralists in parts of Iran (see Bradburd 1990; Black-Michaud 1986), and Inner Mongolia (Sneath 1999a: 167-178) indicates the presence of similar patterns of social class formation in these settings.

In particular, class distinctions within these pastoral societies have been found between elite employers, those who rely on hired labor for herding, and shepherd employees, those who sell their labor for wage employment as herders. It does appear that class-like distinctions are more prominent in pastoral societies with long histories of extensive regularized exchange (Bradburd 1990: 34) and with strong political ties to neighboring states (Irons 1994; Tapper 1990).

In terms of class demographic differences, census data on Komachi pastoralists from Iran reveals that on average 22.3 percent of the children born to shepherd families died in childhood, compared to only 15.6 percent in employer families (Bradburd 1990: 94). Differences in the migratory cycles of large herd-owning elites and their employees have also been observed among several pastoral groups in Inner Mongolia (Sneath 1999b: 227, 254). In general, large herd-owners appear to be more mobile (*ibid.*).

Salzman (1999, 2000), however, cautions that classes are largely found in pastoral societies who through peasantization processes have experienced reduced political autonomy or increased state encapsulation as well as greater involvement in national and international exchange markets. Pastoralists like the Baluch (Salzman 2000) and Yomut Turkmen of Iran (Irons 1994) are largely egalitarian (*i.e.*, they lack social stratification or class groups), Salzman (1999) argues, because they are located in peripheral geographic areas far removed from effective state control (that is until very recently) (Salzman 1999: 39). Thus, these tribes have been able to maintain their tribal identity and political autonomy, and continue to rely on their segmentary organization for defense and protection. Such societies are economically characterized by the articulation of modes of production (*i.e.*, capitalist and pre-capitalist).

The focus in the present study is on Bedouin agro-pastoral tribes in the Bekaa Valley, Lebanon. Bedouin tribes in the Middle East are considered among the more egalitarian, decentralized of segmentary tribes known to humanity. The Rwala Bedouin of Arabia (Lancaster 1981), the al Murrah Bedouin of the Empty Quarter (Cole 1975), the Sanusi Bedouin of Cyrenaica (Evans-Pritchard 1949), and the Hadramaut Bedouin of Yemen (Bujra 1971) have all been described as being socially and politically egalitarian. That is, they lack specialized institutions, means of coercion, and have individual and democratic decision-making.

However Bedouin tribes in the Bekaa Valley, have clearly been implicated in “peasantization processes” over the last half century. Most notably, since the beginning of agricultural and infrastructural development under the French Mandate, the nomadic movements of tribes have been increasingly circumscribed and controlled by the state. The mechanization of transport in the mid-1960s (i.e., the replacement of camels with trucks) accelerated sedentarization and the villagization processes in Bedouin society. Such “peasantization processes” have been accompanied in many parts of the world by class stratification (see Salzman 1999).

Dissertation research was thus undertaken to determine whether local social relations and forces of production impinge upon demographic behavior. Research among Bedouin tribes in the Bekaa Valley, Lebanon indicates that the markings of social class do not exist among the Bedouin (see Chapter 3). Intrasocietal forms of production while tied to the broader capitalist mode are not entirely capitalist. The central question of this dissertation is thus: do different forms of production have their own demographic regimes? The three major household forms of production in Bedouin society are:

sharecropping, wage labor (both agro-pastoral and manufacturing), and independent pastoralism/shepherding. In order to address the question of whether different forms of production have their own demographic regimes, I employed a mix of qualitative and quantitative methods derived from demography, ethnography, and historical political economic analysis. The next section provides a summary of the methodology.

Section 1.2 Methodology

Overview of methods

In order to address the question as to whether distinct forms of production have their own demographic regimes, I obtained information on the political, economic and social structure as well as the demographic structure of Bedouin tribal society. Because I was interested in obtaining a holistic portrait of Bedouin productive systems—one that included the broader political economic and cultural context—I utilized a mix of anthropological and demographic methods.

Specifically, political economic and demographic data obtained in this study was derived from: a) a semi-structured questionnaire administered to the entire sample (containing over 100 questions) which covers reproductive histories, work histories, marriage, inheritance and gender relations (see Appendix A); b) oral histories administered to a sub-sample of 15 women and ten men which examined labor activities and reproduction in the context of the family life cycle, (i.e., from childhood to adulthood); c) local historical sources that included governmental records and ethnographic sources—government records were largely on the Bekaa, while some local travelers and academics have produced some ethnographic material on Bedouin tribes in

Syrian-Lebanon; and d) ethnographic field methods. Definitions and discussion of *specific* demographic or economic measures are provided in each of the relevant chapters.

I conducted all interviews with Bedouin women (i.e., semi-structured interviews with 240 sample women and oral histories administered to the subsample of 15 women) in Arabic without the assistance of a translator. Although Bedouin Arabic does bear important dialectical differences to the colloquial Lebanese dialect, my fluency in Arabic allowed me to adjust to the Bedouin dialect in less than a month¹. Oral history interviews were taped with the consent of the interviewee and all were later transcribed in Arabic.

In terms of male interviews, my first male research assistant, conducted the semi-structured questionnaires with 108 Bedouin men. Oral histories with men were conducted by a second male research assistant since my first assistant was studying and preparing for college exams during this phase of my dissertation research. Male interviews were also administered, recorded and later transcribed in Arabic.

Semi-structured interviews were generally conducted in a private setting. I specifically asked women for privacy during the interview. For example, if the setting was a stone house, my male assistant would conduct the interview in one corner of the room, while I chose another room or far corner of the same room. Sometimes small children would cling to their mothers during the interview and sometimes adolescents would intermittently enter the room. However, for the most part, privacy was maintained.

Preliminary practice interviews and ethnography during the early stages of my dissertation revealed that the Bedouin are extremely direct and candid. The Bedouin are not socialized to internalize anger or hostility, but to express even their most intimate

¹ The Bedouin have no difficulty understanding the Lebanese dialect and so were easily able to explain unique terms/concepts or proverbs not found in the colloquial Lebanese dialectic.

sentiments. As a result, it was not difficult to discuss issues of contraceptive use (or lack thereof), marriage, sexual intimacy, and gender relations. Similarly, there are no cultural stigmas attached to discussions of infant and child death. While grief and sadness are expressed verbally, socialization seems to encourage stoicism in the face of pain.

Due to increasing Bedouin-peasant divisions in the Bekaa, I was reluctant to enlist the assistance of peasants in order to establish contacts within the Bedouin community. Many peasants in the Bekaa display ethnic chauvinism toward and class devaluation of the Bedouin. Since I did not share the same sentiments and did not want to be perceived as such, I ended up establishing contacts myself in each Bedouin community. At the beginning of my fieldwork, I was uncertain as to how well this would work. However, such concerns were short-lived as my initial experiences quickly confirmed what many anthropologists and travelers already know: the Bedouin are remarkable in their hospitality and warmth. It is difficult to express the friendship and warmth felt in the presence of the Bedouin. When I sat down for the first time with a Bedouin family and received my first cup of coffee, I never wanted to leave.

Establishing my identity as a married Lebanese-American from X natal village and X religion in Lebanon was important for establishing trust within the community. The Bedouin also consider social personality characteristics as vital to building trust. The Bedouin are expert at noting character flaws and pointing out deceptive or dishonest behavior. Thus, most important to establishing trust was building a friendship that was based on honesty and familiarity with one another's personal beliefs, individualistic habits and broader social relationships with affines and agnates.

Bedouin families were comfortable knowing that I was conducting research for my dissertation and that their anonymity would be maintained. Because some individuals expressed misgivings about including pictures in any publications, pictures of individual Bedouin men and women in the current study were only included if permission was obtained from the said individual or family. In short, I was able to establish the friendships necessary for conducting research in each community. Once relations were established among a certain tribe in one village, other villages in which the same tribe was found were much easier.

Overall, couples enjoyed discussing their reproductive and productive lives. Particularly meaningful to participants were discussions of their nomadic tribal heritage and customary practices. Most interviews lasted around one hour and 20 minutes. Age estimation and dating of births/deaths were more difficult among older women. Local event calendars were used extensively among older women, which often extended the total duration of the interview. None of the women refused to participate in the study. However, several women who were in the middle of milking sheep or entertaining guests asked us to return at a more convenient time for the semi-structured interview, which we did.

At the close of the semi-structured interviews, my male assistant and I joined other members of the household and their guests. Socializing was perhaps most important to developing trust. Although, at the beginning of the interview, I clarified the purpose and goals of the study, after the interview, Bedouin participants (both men and women) had several questions as to my family name, religious beliefs, childbearing experiences, and also more general questions about life in America. In particular, however, the

Bedouin loved quizzing me as to my knowledge of different tribes in the region, my familiarity with the meaning of terms in the local Bedouin dialect, and my knowledge of their cultural traditions.

Due to the long duration of semi-structured interviews, the high-level of cooperation and patience required with return visits for cross-checking and follow-up of participant responses, I decided to compensate all 240 women in the study. I discovered that many families needed shoes, clothing and backpacks for small children, while other women expressed interest in hand/body lotion for dry skin and shampoos. Gift-giving requires special rituals of disavowment in Bedouin and Arab society in general. It is considered rude and culturally inappropriate to offer people money or goods with any hint of superiority. One must first denigrate the gift and point out that it in no way reflects the worth of the individual. The giver can then present the gift as an object that will serve to remind the receiver of the giver.

Because my research involved a regional study, I had three different Bedouin host families. As it turned out, my host families were from three distinct tribes, production systems and locations in the Bekaa. My host families were crucial in helping me obtain more intimate familiarity with Bedouin social life in the region. The next subsections provide more detail as to the study area, population and data collection procedures.

Study Area

The study is based on research undertaken among Bedouin tribes in the Bekaa Valley, Lebanon for a period of 15 months—from June 2000 thru September 2001. Research was carried out among Bedouin tribal communities scattered over the entire

Bekaa region. There are over seven tribes in the Bekaa who originally belong to the Bedouin Confederation of tribes of the Syrian Desert. In terms of Bedouin residential communities in the Bekaa, there are over 18 distinct villages/hamlets and neighborhoods whose populations range in size from 30 to 1500 members. Most Bedouin villages/hamlets lack paved roads. However, the few villages located on the outskirts of peasant villages do have paved roads.

Study population

The study is based on anthropological demographic and economic interviews with 240 ever-married reproductive and post-reproductive age (15-54)² Bedouin women and 108 of their spouses. Women's spouses were interviewed if they were present³ on the day of the survey. Ever-married Bedouin women between the ages of 15-54 were selected from every sixth household⁴ in Bedouin villages, hamlets and neighborhoods in the Bekaa Valley, Lebanon.

My original sampling methodology was to obtain a stratified random sample of Bedouin women. A stratified random sample entailed developing a list of household productive systems from which to randomly select participants. However, such a sampling technique proved cumbersome and more importantly was perceived as an impolite way of entering a community. I opted for a systematic random sample instead, which was viewed as less impolite and allowed statistically valid inferences to be drawn for the whole population (Werner and Bernard 1989). Thus, households were only later

² One of 240 sampled is actually 56 years old but is included in the demographic analyses of women of post-reproductive age.

³ Spouses of divorced women were not located or sought for an interview.

⁴ Bedouin families living in tents and shacks were also included in the survey.

dichotomized into productive groups. I relied on informants to notify me of the whereabouts of Bedouin villages in the Bekaa as many were not well-known or located far from major road networks.

The sample size of 240 was determined as sufficient, by power analysis and conventional anthropological demographic studies, to compare such mean standard demographic measures as birth intervals, age-specific vital rates, and so on (with age as a co-variate).

Characterization of forms of production, assessed by: a semi-structured questionnaire, ethnographic methods, oral work histories and government archival sources

Semi-structured questionnaire

In order to determine whether different forms of production have their own demographic regimes, I obtained general information on work activities of household members from a semi-structured questionnaire (for specific questions see Appendix A). Over five questions in the interview were specifically related to productive activities. Forms of production were determined by work histories. That is, work activities *since marriage* and their approximate duration were obtained from women and men (when present).

Two questions centered around class relations (e.g., “Are there class or economic differences within Bedouin society? Explain”; “Would you allow your daughter or son to marry someone from a different tribe, economic group, or a Fellah (non-Bedouin peasant?”). The semi-structured questionnaire was also used to obtain data on wealth in the means of production among household forms of production. Information on wealth

was then used to create a wealth index of the means of production following Sheridan (1989) (for a detailed discussion see Chapter 3).

Ethnographic Methods and Oral Histories

In order to determine the presence or absence of class relations at different scales, the social relations (i.e., gendered division of labor) among different forms of production, and social and political organization, I used ethnography and oral history interviews. In terms of ethnography, participant observation was used to help obtain familiarity with Bedouin forms of production, segmentary sociopolitical organization, and social reproduction. Ethnographic research was also conducted among peasant families who lived in villages that were mixed i.e., contained both Bedouin and *fellahin* or non-Bedouin peasants.

I obtained oral history narratives from a sub-sample of 15 women (5 pastoralists, 5 wage laborers, and 5 sharecroppers) and 10 men (4 pastoralists, 3 wage laborers, and 3 sharecroppers from each gender category). In terms of oral histories, these involved questions as to the labor activities of individuals during childhood and marriage as well as their parent's work activities. Oral history interviews were not structured since the primary goal was to establish a more detailed and dynamic understanding of the broader context of men's and women's work and childbearing experiences throughout their lives.

A great deal of flexibility and improvisation was maintained in formulating specific questions since detailed histories on themes of interest are only possible if the interviewee is comfortable/unhindered and spontaneous in recounting their personal histories. Because such interviews were highly open-ended and flexible, each interview

had a slightly different wording of questions, emphasis, direction, and tempo. However some common questions were: Describe your earliest memories of work responsibilities as a child in your natal home”; “Describe your relationship as a child with the children of *fellahin* during your family’s yearly migrations to the Bekaa”

Government Archival and Other Local Historical Sources

In order to obtain information on the broader political economic and historical changes which impinged upon production and reproduction in the Bekaa, I did a thorough search in US and local university libraries and local ministries in Beirut and the Bekaa for historical and government archival sources as well as demographic surveys and ethnographic studies. Because of the Civil War and the politically sensitive subject of confessional population differences, only one population census from 1932 is available. However, a United Nations Population and Housing Survey was conducted in Lebanon in 1996—the latter provides data on household size, population density and the total fertility rate in the Bekaa. There have been two government censuses on agriculture—1961 and 1970—both of which I was able to obtain.

Most of the French archival material that was part of the ministry of agriculture in the Bekaa was destroyed during the Civil War. Thus, much of the information on landholdings, remittances, and occupational structure during the French Mandate and after the 1970s was primarily obtained from secondary historical sources in Arabic and English. In terms of ethnographic studies, two dissertations have been written on the Bekaa. The first was written by a Bedouin sheikh, Al-Faour, who conducted research on his tribe, Al-Fadl, in Syria and Lebanon during 1962-63. The second dissertation, which

spawned a book and several articles, was conducted by Dawn Chatty in the Bekaa Valley during 1972-73.

In terms of ethnographic material on Bedouin tribes in Syria, I found four books published in local press (in Arabic). Three of the books deal with nomadic tribes and one lists both sedentary and nomadic tribes in Syria. This material was helpful in comparing practices among Lebanese Bedouin with customary practices among the same tribes living in Syria. Likewise, the ethnographic material was helpful in comparing Bedouin-peasant relations in Syria and Lebanon.

Characterization of reproduction assessed by reproductive histories, semi-structured questionnaire, ethnography and oral histories

Reproductive histories

Reproductive histories were (part of the general semi-structured questionnaire and) drawn up for all 240 individual women in the sample. (for a thorough discussion of the method employed see Howell 1979, 2000; see also Chapter 5). In reproductive histories, all offspring are listed in birth order and information about their year of birth and year of death as well as the age of the mother is recorded. Reproductive histories were also used to inquire about pregnancies ending in miscarriage or stillbirth although maternal recall error is likely to be a factor (see Chapter 5).

The primary use of reproductive histories in terms of the present study was to derive estimates of mean number of live births as well as the proportion of infant and child deaths for different forms of production as well as to derive estimates of age-specific fertility rates (ASFRs), total fertility rates (TFRs) and infant and child mortality rates for the sample as a whole. Both pre- and post-menopausal women were included in

the analyses, however due to recent evidence of fertility decline and the sizable number of women of post-reproductive age in the sample, retrospective TFRs are the more reliable estimates of the reproductive experience of Bedouin women (see Chapter 5).

The second major use of reproductive histories was to provide data on the proximate mechanisms of fertility such as marriage timing and breastfeeding practices (see Bongaarts and Potter 1983; Campbell and Wood 1988). Specifically, I asked women about their first age at marriage and marital histories to determine whether marital instability influences fertility. Lastly, reproductive histories were used to provide historical estimates of fertility of the parents of informants utilizing a technique developed by Harpending and Draper (1990) (see Chapter 6).

Because some of the older women had difficulty allocating their exact ages and the dates of events, I created a local event calendar to help reduce age estimation error (see Freedman et al. 1988). Perhaps somewhat ironically, the political turmoil from civil and regional wars, military invasions, political assassinations, and so on made it possible to provide a detailed even history for Lebanon/Syria, which in turn allowed me to determine mothers' ages with greater accuracy. Women's age estimates were cross-checked with those of their spouses and family members.

Most notably, there was no evidence of age-heaping in my sample. I was unable to obtain an accurate estimate for the age of only one woman interviewed; thus I excluded her from the analysis. Assigning women to five-year age cohorts, further reduces the margins of error involved in the dating of birth events. In sum, any errors in calculations are not expected to be systematically biased in any one direction, and should not exceed two years.

Structured Questionnaire

To ascertain cultural conceptions of children and parenting across forms of production and children's role in the family economy in general, I included more structured questions in the sample survey questionnaire. Informants were asked whether they agree/disagree/don't know with fifteen statements listed on the inventory (for specific statements see next to last section of the general questionnaire in Appendix A).

Ethnographic Methods and Oral Histories

In order to further understand the marriage system and the cultural meaning of childbearing/childrearing in Bedouin society, I relied on ethnography and oral histories. Ethnography was invaluable in understanding the cultural marriage and gender system as well as family formation. Oral histories with 15 women and 10 men (mentioned earlier) were also used to understand the context of family building. Questions centered around marriage timing (and its negotiation) and the meaning of children (e.g., "Tell me about how you came to be married"; "Why are children important?").

Statistical Analyses

Most of the behavioral data pertaining to forms of production were analyzed with the Statistical Package for the Social Science (SPSS/PC+) version 10.0. ANOVA analyses were used to compare mean wealth, age at marriage, and so on across forms of production with marriage duration as a covariate. Poisson regression was used for all demographic analyses in which either fertility or mortality appear as dependent variables. Poisson regression was used because the distribution of demographic variables in the

sample were better described by a Poisson distribution, making traditional regression or ANOVA analyses inappropriate. Poisson regression is a special case of the Generalized Linear Model. This model deserves the name “Generalized” because it also includes traditional regression and logistic regression under its domain (McCullagh and Nelder 1983).

Poisson distributions have three special features that make ordinary (i.e., least squares) regression problematic. First, the Poisson distribution is skewed; traditional regression assumes a symmetric distribution of errors. Second, the Poisson distribution is non-negative; traditional regression might sometimes produce predicted values that are negative. Finally, the variance of a Poisson distribution increases as the mean increases; traditional regression assumes a constant variance.

Poisson regression model is not troubled by any of the above conditions. In particular, Poisson regression implicitly uses a log transformation which adjusts for the skewness and prevents the model from producing negative predicted values. Poisson regression also models the variance as a function of the mean. Because SPSS does not yet have a module for generalized linear models, I use the SAS GENMOD procedure to compute a generalized linear model.

Dissertation Outline

The dissertation is divided into three parts. Part I examines the economic and socio-political structure of Bedouin society. Part II discusses the relationship between demographic regimes and productive systems at different scales. Part III summarizes the overall findings of the dissertation and its broader contributions to anthropology.

In order to establish the temporal and spatial context, Chapter 2 provides a political economic history of the area moving from the national and regional level to the local tribal communities in the Bekaa. Beginning mostly with the French Mandate period, I discuss the social transformations that have had the most impact on the Bedouin of the Bekaa. Chapter 2 also provides a general description of the research site and population geography of the area.

Chapter 3 describes the forms of production in the Bedouin social economy and how they predict ownership of the means of production. While the discussion points to the absence of class relations *within* Bedouin society, class exploitation *is* apparent at different scales, particularly between peasant landowners and a landless Bedouin population. Chapter 3 also points to the presence of economic inequality within Bedouin society, but suggests that economic inequality is not synonymous with socio-political stratification.

Chapter 4 highlights the overall egalitarian ethos and sociopolitical organization among Bedouin tribes in the Bekaa. In particular, kinship continues to be a central organizing principle of social life. Segmentary lineage structure and ideology further reinforce equality. The political-economic history of Middle Eastern tribe-state relations, particularly the presence of small regional states, has also contributed to tribal structures that are more fluid and less hierarchical. Although symbolic constructions of gender are changing, gender egalitarianism emerges as an important feature of Bedouin culture.

Chapter 5 presents demographic findings for the total Bedouin population and for different forms of production in particular. The fertility and mortality experiences of the Bedouin are examined in comparative perspective. The discussion highlights the

importance of early weaning and marriage in promoting high fertility among the Bedouin. However, the presence of high quality weaning-foods (i.e., sheep and goat milk) has contributed to relatively low mortality of the population as whole. Chapter 5 also reveals the central finding of the dissertation, namely that *distinct forms of production do not have their own demographic regimes within Bedouin society*.

Chapter 6 attempts to explain the central finding of the dissertation in more detail. Closer examination reveals that economic differentiation in ownership of the means of production does not significantly impact childbearing. While statistical and ethnographic data in Chapter 6 reveal that fertility does not follow wealth, children appear to have a minor impact on family wealth. However, while children are important to the family economy in their role as laborers, careful examination of Bedouin demographic structure (specifically the distribution of fertility) reveals a striking homogeneity in terms of women's reproductive experiences. These findings suggest that the demographic structure reflects the overall egalitarian structure of Bedouin society.

Most of the intrapopulation or intrasocietal variation in Bedouin fertility is due to variation in the onset of age specific sterility among married women. Chapter 6, however, confirms the presence of class differences in demographic behavior at different scales, namely between the Bedouin and peasants.

The last chapter, Chapter 7 summarizes the central findings of the dissertation and concludes that in order to understand variation in demographic structure of human societies greater attention to scale is required. In particular, attention to historical and cultural geographic variation is crucial to developing a more rigorous model of the interrelationship between productive forces and demographic regimes.

CHAPTER 2: RESEARCH SETTING

Section 2.1: Population Geography

The research setting for the current study is the Bekaa Valley, Lebanon (Figure 2.1). The Bekaa Valley is an upland valley located between the Lebanon Mountains and the Anti-Lebanon Mountains. The Bekaa is about 177 kilometers (110 miles) in length and 9.6 to 16 kilometers wide with an average elevation of 762 meters. Its middle section spreads out more than its two extremities. The population of the Bekaa Valley in 1996 was estimated slightly over 400,000 with a population density of 90.3 person/km² (UNDP, 1996)

Geologically, the Bekaa is the medial part of a depression that extends north to the western bend of the Orontes River in Syria and south to Jordan through Al Arabah and Al Aqabah, the eastern arm of the Red Sea. In terms of its two major surrounding mountain ranges, the Lebanon Mountain range is approximately 169 kilometers long and 3,360 meters high at its peak. The Anti-Lebanon mountains emerge from a base south of Homs in Syria and is almost equal in length and height to the Lebanon mountains. The Barada Gorge divides Anti-Lebanon.

In the northern section, few villages are on the western slope, but in the southern section featuring Mt. Hermon (286 meters), the western slopes have many villages. Anti-Lebanon is more arid, especially in its northern parts, than Mount Lebanon and is consequently less productive and more thinly populated. The northern Bekaa is very dry,

becoming semi-desert, with a much wetter area to the area south of the Beirut-Damascus road. The northern end of the valley is primarily used as grazing land by semi-sedentary Bedouin pastoralists. Further south is where the more fertile soil is used to support farming. The northern Bekaa receives an annual average rainfall of only 230 mm (nine inches) compared to 610 mm (24 inches) in the south-central portion.

Section 2.2: A Historical Overview of the National and Regional Political Economy

The Bekaa is Lebanon's major agricultural area extensively farmed for cereal, fruits and vegetables, vineyards and orchards and historically served as a granary of Roman Syria. The Bekaa Valley comprises 40 percent of Lebanon's arable land. Further south, the Litani River was dammed in 1957 to form Lake Qaraoun. Bekaa is the Arabic plural of *buqaah*, meaning a place of stagnant water. In terms of regional and broader agricultural production, the commodification of agriculture, Civil War, the Israeli invasion and currency devaluations have changed the face of agricultural production in Lebanon. After the Israeli invasion, Lebanon witnessed a major depreciation of the Lebanese Pound against all major foreign currencies, and the emergence of a structural budget deficit from 1983 till the present day.

The collapse of the Lebanese pound in 1984-85 had a devastating impact on wheat and vegetable crop production. The fall of the pound meant that local fruit and vegetable prices increased by 85 percent that year. The sharp depreciation of the pound also sparked price hikes for seeds, fertilizers, feeds and insecticides. The most dramatic changes in Lebanese agriculture were seen in wheat production⁵. From 1977 to 1979, the

⁵ Fruit exports also declined in the 1980s. In 1979 fruit exports regained their pre-war levels reaching 333,071 tons. However, in 1984, fruit exports reached their lowest level since 1962, in part because Syria

Lebanese devoted 45,000 hectares to wheat. Production plummeted from a record 76,000 tons in 1974 to 9,000 tons in 1987. Specifically, the amount fell to 23,000 hectares in 1982, 20,000 hectares in 1983 to, to 17,000 hectares in 1984, to 14,000 hectares in 1985, and to 13,000 hectares in 1986. A major reason for declining wheat production was an increase in the production of profitable crops: hashish and opium poppies.

Hashish had long been grown in the region around Al Hermil in the northern Bekaa Valley. Before the Civil War, the government had encouraged local farmers to grow sunflowers instead, but these efforts were blunted by the onset of civil strife and by wealthy *zuama* (notables sing, *zaim*) and politicians who were in firm control of the illegal export market. Hashish became a major cash crop in the 1970s and 1980s. Annual production rose from about 30,000 tons at the start of the Civil War to around 100,000 tons in the early 1980s, when hashish was grown on an estimated 80 percent of agricultural land around Baalbek and Al Hermil. The government claimed to have put an end to illegal crop production in 1994 with an aggressive campaign that included burning and poisoning thousands of acres of hashish and the smaller fields of poppies that produced heroin exports.

However, because the government did not follow up on its promises to develop regional agricultural projects and provide new crops to take the place of hashish, illicit crop growing is likely to reemerge. Poverty, unfavorable international exchange rates, and government corruption, both local and national, will likely continue to fuel the underground economy. Recently, there has been a resurgence of wheat production in the

had restricted imports of Lebanese produce so as to prevent the sale of Israeli produce, which found its way into Lebanon through the Al Janub Province in the south. Potato production also increased as follows: from 45,000 tons in 1977, to 70,000 tons in 1978, to 112,000 in 1979, and 120,000 in 1980.

Bekaa largely due to inadequate rainfall in the region over the last decade. Local farmers plant wheat because it requires much less water than vegetable crops.

In terms of industrial expansion, prior to the 1960s industry was limited in the region. Beginning in the 1970s, agro-industries were the most prosperous; however, construction materials and farm equipment also comprise regional industry. Industries in the region include: canned vegetables and sugar from beet; Lebanese Arak and a variety of wines; several chicken and cheese factories; 27 tanneries at the end of 1979; 46 iron workshops; 15 chemical industries and 17 furniture plants. Also, in 1970 a ceramic plant was started near Zahlé and a glass plant as well as a cement and mixers plant in Chtoura (Daher 1992: 66).

Perhaps the most fundamental change in Lebanon's economy from independence to the present time has been the decline in the agricultural sector and the rise of a service economy. The Lebanese labor force continued to rely heavily on the agricultural sector up until the early 1970s. In 1967, it was estimated that 49% of the labor force in Lebanon relied on agriculture. Estimates in the early seventies, however, indicate a sharp decline with one-fifth of the labor force in Lebanon deriving their livelihood from agriculture (Daher 1992: 44-45). By 1981, 9.2% of the total active population was employed in agriculture (ibid. 50). Sixteen years later, in 1997, the percentage of the labor force in Lebanon in different sectors was as follows: 62% in services; 31% in industry and 7% in agriculture (Ministry of Agriculture Data, 1997).

Lebanon's economy has clearly witnessed a dramatic decline in agriculture as a means of livelihood since the early 1970s. While estimates of employment by sector are not available for different regions, most of the labor force involved in agriculture in the

Bekaa today largely consists of Lebanese and Syrian Bedouin, Syrian migrant workers, Kurds, and Palestinian refugees. Estimates of regional differences in landholdings are only available for the early 1960s. The size of the average landholding in the Bekaa was estimated at 2.6 hectares in 1963 (Daher 1992: 43). The number of landowners in the country at this time is estimated at 276,000 with 10% of large holders owning between 40% and 70% of total land and 50% of small holders owning 11% of the total cultivated lands. Nevertheless, agriculture's share in the GDP is relatively small, comprising less than 10% of GDP in 1973 (Daher 1992: 44-5).

Economic growth in Lebanon since independence and particularly between 1943-1975 can largely be attributed to the efforts of the private service sectors. Emigrant's remittances, tourism, trade, education and other service sectors in addition to the currency crisis led to the rapid urbanization of Beirut and the near Mount Lebanon. Emigrant's remittances have become the backbone of the Lebanese economy since the outbreak of the Civil War. Maroun (1984) shows that remittances increased from 3.7% of the Lebanese GDP in 1970 to 39.8% in 1978 (p. 81). By the early 1980s, remittances constituted 50% of GDP (ibid.). Issawi (1966) describes how remittances allowed some peasants to buy plots from landlords which led to a surge in land speculation. The large depreciation of the Lebanese pound and remittances led to expanded investment in land property and rental land in Lebanon, which undermined the position of landlords who had to sell a large part of their inherited lands to maintain their social status (Daher 1992: 51).

Accordingly, by the mid-twentieth century the influence of the traditional feudal families or landlords was in decline, particularly due to the increase influence of the financial sector, commercial groups and other economic service sectors. While

landowners are still a dominant class, particularly in rural areas, they no longer enjoy the monopoly of power they once had. A new class of industrialists, bankers, and businessmen has rapidly changed the political economic and social structure of Lebanon. The absence of an effective public sector and the dominance of private capital (seen recently in billionaire prime minister Rafic Hariri's "Solidaire" company in charge of rebuilding Beirut in hopes of attracting Gulf, American and European capital) has continued to create economic instability and imbalance.

As a result of large urbanization, with roughly 85% of population residing in urban areas (UNDP, 1996), Lebanon was to become about the only country in the world where two thirds of its national income is generated in the production of services (Daher 1992: 25). Thus, Lebanon since independence may be characterized as a weak state led by a commercial bourgeoisie that has been relatively unhampered in pursuing free market economic activities, which has led to unbalanced economic development and the creation of a large urban proletariat (due to massive migration from all Lebanese rural areas (especially south Lebanon and the Bekaa Valley) to Greater Beirut). As Daher (1990) states: "in spite of its sectarian face, Lebanon is a country of enormous disparities between social classes and regional divisions" (p.107).

Section 2.3: A Historical Overview of Bedouin Tribes in the Bekaa Valley, Lebanon from the Ottoman Period to the French Mandate

While a discussion of the current economic and demographic structure of Bedouin tribal society will be examined in the Chapters that follow, a brief history of Bedouin tribes in Syria-Lebanon is needed. *Bedu* or Bedouin means an inhabitant of the Badia

(Figure 2.2), the semi-desert steppe located between the cultivated lands on the Eastern Mediterranean coast and the fertile Euphrates River Valley. The Badia extends north from the Nafud Desert in Saudi Arabia and comprises W. Iraq, E. Jordan and SE. Syria. Historically, this area formed a nearly impenetrable area between the populated areas of the Levant and Mesopotamia.

The vast majority of Bedouin tribes in the Bekaa Valley, Lebanon historically belong to the Bedouin Confederation of tribes of the Syrian Desert (*Badiyah Ash Sham*). The Syrian Desert is an upland plateau scored with numerous wadis and covered with grass and scrub vegetation, which are used extensively for pasture by both nomadic and semi-nomadic herders. There are somewhere around 35 nomadic tribes and 41 semi-sedentary tribes in the Syrian desert today.

Several Bedouin tribes in the Bekaa still express ideological allegiance to Syrian tribes, although this has diminished over the last half century. While my sample contained over seven tribes, the most numerous tribes were members of the Al-Fadl and Al-Hassanna tribes. Chatty (1975) provides a more detailed discussion of the history of tribal wars, population expansions, contractions and movements in the Syria-Lebanon region over the last three to four centuries. Cyclical expansion and retraction of Bedouin tribes has characterized tribe-state relations in the Middle East for centuries (for a discussion see Ibn Khaldun 1961; Gellner 1990). However, the major outcome of the most recent of these political, demographic and ecological processes (which began in the late seventeenth century⁶ and continued for nearly one hundred and fifty years) was that

⁶ During the late seventeenth century, Mohammed IV (1648-1687) had dispatched Ottoman troops to take up the war against Austria (Hourani 1946). The power and effectiveness of the Ottoman Empire during this time was greatly diminished, prompting initial tribal expansions and pushing the frontiers of pastoralism

Bedouin tribes at the end of the nineteenth century found themselves in marginal areas of agriculture closer to the Mediterranean coastline.

Thus, in the mid-nineteenth century as a result of tribal expansion and intertribal warfare over pastures and water rights in the Homs-Hama region in Syria, some defeated tribes moved down the plain of Homs to use the marginal pasture lands, especially the slopes of the Anti-Lebanon mountains. The first victim of intertribal warfare appears to have been the Al-Hassanna tribe, who lost the fight for their pasture land east of Homs against a Sbaa-Rwala alliance in 1850. In the aftermath of their defeat, they joined the Rwala (Chatty 1975: 61). However, some of their tribal members moved down the plain of Homs to use the marginal pasture land of the Bekaa, especially the slopes of the Anti-Lebanon mountains. Other tribes who had been in the Homs-Hama region for centuries were no match for the more powerful Aneza tribes (from the area around Riyadh) and so they either retreated to marginal areas of the Badia, the marginal areas within the Mediterranean Coastline, or down the plain of Homs into the Bekaa.

In terms of tribe-state relations during the nineteenth century, Ottoman policy towards the Bedouin encouraged tribes to exterminate one another. The Ottomans sent out an army of 30,000 spies and agents actively engaged in instigating feuds between tribes at this time. Turkish troops armed with rifles assisted in the massacre of sword and lance carrying Bedouin warriors. For example, in 1875, the Rwala hired Turkish troops to fight the Sbaa who were soundly defeated (see Chatty 1972: 66). Agricultural expansion was actively sponsored by the Ottomans in the late nineteenth century who armed

west through the borders of the Mediterranean coastline (Chatty 1975: 57). Drought and population pressure may also have been a factor in tribal expansions from the Nejd northward (ibid.).

Turkish soldiers at new border garrisons to give agriculturalists security and ward off tribes.

The French policy towards Bedouin tribes was slightly different in that it involved a mix of both military pacification *and* tolerance, as officials were mainly concerned with maintaining security on the borders of settled cultivation. The Bedouin were free to conduct their affairs in their traditional manner as long as they did not disturb the settled population. The French requested that the Bedouin not carry arms in settled regions, and that when fighting among themselves they leave settled communities out of any skirmishes. The French unlike the Ottomans were more concerned with growing urban populations than they were with Bedouin tribes.

However, this changed somewhat when the Druze revolt (1925-27)⁷ in the Druze Mountain spread to Hauran and southern Syria, and Bedouin tribes in the Homs-Hama area, sympathetic to the rebellion, increased their raiding activity. The French quickly curtailed Bedouin raiding activity by launching air bombardments against tribes (Chatty 1972: 80). Raiding from that time onwards was prevented even when it was only between tribes. In 1930, a system of crime control was formally established placing affairs in the pastoral zone (the Badia) under the jurisdiction of the Sheikhs and the Contrôle Bedouin (a supervisory body in charge of Bedouin affairs) (Chatty 1972: 82). Tribal rights to particular pasture areas and watering places were recognized and patrolled. Effective control over the ban on carrying firearms in settled regions was maintained and taxes on livestock were established. To ensure the peace, French authorities paid monthly subsidies to tribal leaders. The French also built new wells and restored old qanats

⁷ The Druze rebellion was instigated by French administrative and social reforms which disrupted local political hierarchy and autonomy.

(underground water systems), and increased the number of mobile clinics (Chatty 1972: 81).

But perhaps the most important changes were seen in agricultural and infrastructural development. The French further accelerated agricultural expansion originally begun by the Ottomans. Under the French Mandate, there was massive infrastructural development, particularly road building and mechanization of agricultural equipment and transport (Chatty 1972: 83-86). However, in the Badia, cars were not adopted for transport due to their high cost (ibid. 83). Land surveying and registration was also carried out by the French, which profoundly changed systems of property among both agriculturalists and pastoralists. This development would establish rights of ownership, eliminate land disputes, consolidate viable land holdings and provide a basis for land taxation (ibid. 84). Thus, by 1930, a new Land Code and system of title replaced the old Ottoman system.

In Bedouin pastoral communities, land traditionally held by the tribe as a 'right of usufruct' now was registered as private 'ownership' in the name of an individual, usually a tribal leader. Under the French Mandate, much tribal territory (uncultivated land) was registered. For example, in the Homs-Hama region, land encompassing 20 villages, was registered in the name of Sheikh Trad-al-Milhem of the Al-Hassana tribe. Thus, the 1930s there was a marked the change from tribal usufruct to individual ownership.

The French improvements in agriculture were to have a major impact on Bedouin tribes in the Syrian Desert. In 1938, *Contrôle Bedouin* reported that large numbers of the Aneza tribe had left Syria and were remaining in the Nejd. The same was true for several tribes in Aleppo (Chatty 1972: 88). The process of agricultural expansion was met in two

major ways. First, some tribal units settled on land registered in their leader's names and began farming, making token presentations or rental payments to their leaders each year. Others tribal units, such as Bedouin tribes in the Bekaa Valley, began to reduce the extent of their migrations and "rationalized" grazing practices (Chatty 1972: 88). Thus, in the face of diminishing pastureland, largely due to agricultural and infrastructural expansion, a less migratory and more sedentary form of pastoralism emerged among Bedouin tribes in the Bekaa during the 1930s.

Parallel in importance to the change in grazing practices of Bedouin tribes in the Bekaa (and the Badia in general), was the shift from camel rearing to sheep rearing. French officials by the early 1930s began reporting a growing phenomenon whereby camel raising as it became less lucrative was progressively abandoned for sheepraising both among Bedouin tribes in marginal areas of cultivation in Lebanon/Syria and in the Badia itself (Chatty 1972: 88-89). (However, camels continued to be decorated and used for transport/camel service and for indirect and direct dowry payments).

Furthermore, with the network of roads well developed, tribes began to use water camions, instead of relying on ground water or wells, to water their sheep (ibid. 89). Thus, a modernizing form of sheepraising was developing which allowed sheep to be reared in areas not possible before. The next section describes the changes in the migratory cycle of Bedouin pastoralists and their relationships with Lebanese landowners in the Bekaa from the 1930s onward.

Section 2.4: Bedouin-Peasant Relations in the Bekaa Valley from 1930s to the Present

The Bekaa Valley is central to the seasonal pastoral cycle of Bedouin tribes. Historically, households migrated as a unit from winter to spring pastures as young boys herded the sheep and camels transported their tents and possessions. Traditional winter grazing lands were east of Homs (in the direction of Tudmor or Palmyra) in the *Badia* (see Figure 2.3 for a map of traditional seasonal pastoral cycle). These traditional winter pastures are in bloom in early January, February and March. The lambing of the flock occurs in February and/or March. Tribes that did not go to these winter pastures in the *Badia* migrated to the northern Bekaa caves of al-Qaa to shelter their sheep from the cold wet winter in the Bekaa. During April-early May, tribes began moving back toward the Bekaa. They camped in scattered and remote areas along the Anti-Lebanon Mountains, where the sheep could graze on natural pastures.

Towards the close of the spring season, arrangements were made between household heads and individual farmers or large landowners whereby the sheep could graze on the stubble of harvested fields and in turn fertilize the farmer's fields with manure. Bedouin men during the summer worked on a daily basis transporting the harvest of the landowners. Pastoralists remained in the Bekaa until the winter season (late September or early October), which again marked their movement north.

In oral history interviews, Bedouin households reported that seasonal relationships with peasant landowners were maintained for long periods of time and were often over twenty years in duration (see also Chatty 1972: 144). This means that Bedouin pastoral families did not have to renegotiate oral contracts or agreements with peasant landowners season after season. Relationships seemed to be marked by patron-client

relations of obligation between Bedouin and peasant families. For example, peasant landowners often allowed Bedouin families to hold wedding ceremonies around their summer tent sites that were located on peasant land.

Oral histories among older Bedouin women also indicate fond memories of childhood play with the children of Lebanese landowners. From oral histories, it appears that exploitative and tense Bedouin- peasant relations emerged after the 1970s. There were several important political economic changes that altered Bedouin-peasant relations. Such changes were part of broader changes occurring in the class structure of Lebanese society. As mentioned earlier, the emergence of a commercial bourgeoisie in Lebanon during independence, (particularly the period between 1943-1975 which was induced by political economic changes in emigration, land speculation, tourism, and so on in turn) changed the social and political position of Lebanon's landowning class.

Bedouin-peasant relations in the Bekaa were also affected by commoditization. In particular, during the 1970s there was an increasing reliance on purchased seeds, feed, fertilizers and insecticides on the part of Lebanese landowners, and an increasing reliance on fruit crop production from the decade before. Both of these developments altered the relationship between Bedouin pastoralists and peasant farmers. The increasing reliance on fertilizers purchased on the market reduced peasant reliance on Bedouin flocks as a source of manure-fertilizer. Increased planting of fruit trees in the Bekaa prevented contractual grazing agreements between orchard farmers and Bedouin pastoralists. Furthermore, the spread of motorized transport (i.e., the replacement of camels with trucks and more affordable cars; see below for a discussion) reduced peasant reliance on camel service for harvest transport. Thus, the commodification of agriculture seemed to

change the relationship of interdependency between Bedouin pastoralists and peasant farmers .

Contracts between Bedouin pastoralists and peasant farmers became increasingly monetized. Oral histories with both Bedouin men and women indicate that cash payment for renting grazing land from peasant landowners was in place by the 1970s. That is, the summer portion of their seasonal pastoral cycle increasingly involved cash payment to landowners per unit of land rented for grazing. Mechanization and monetization in the region were fueled by the replacement of camels with trucks⁸, which occurred between 1963 and 1965 (see Chatty 1972: 93).

Mechanization of transport changed migration patterns, household labor activities, social reproduction (villagization), production (i.e., Bedouin sold livestock to purchase land for household construction and as a result became increasingly dependent on farming), and increased Bedouin reliance on money. First, trucks drastically reduced the mobility of pastoralists. Although the truck does restrict camping grounds to areas that can be reached by roads, its use released camping units from the marched migrations, which were of several weeks duration (between winter and spring pastures). With the truck, the same journey was possible in as little as three hours. Oral histories indicate that before the 1960s, the Bedouin moved at least seven times during the spring and summer periods of the pastoral cycle (see also Chatty 1972: 123). In the 1970s, these movements

⁸ Chatty's (1972) description of Bedouin complaints with camels points to the importance of agricultural and infrastructural development in prompting the change to truck transport (p.111). First, camels require constant supervision due to their highly scattered grazing formation (ibid.). With the spread of orchard cultivation, yet closer supervision was required as camels often damaged fruit crops. Second, the Bedouin complained about camel's flat padded feet, which had little traction on slippery road surfaces. As more roads were being paved, there were new hazards associated with camel transport (ibid.).

dwindled to two moves during the same season. During the period of fieldwork movements averaged a total of 2 moves in the spring and summer combined.

Thus, the mechanization of transport led to a major change in the nomadic movements of Bedouin pastoralists. After 1965, a large number of households began to remain in the Bekaa Valley during the winter, hiring out their trucks and services to neighboring villages and towns including Zahlé and Beirut (Chatty 1972: 121). Chatty (1972) states that by 1972-1973, tribal units and their herds entered the Bekaa as early as March and remained until late November (p. 152). Oral histories from the present study similarly indicate that many households during the 1970s ceased their seasonal migratory movements to Syria and began purchasing land in the Bekaa for household construction. Most land was a joint purchase by members of a patrilineal descent group (i.e., brothers or patrilateral cousins). Although, most Bedouin purchased land in the mid to late 1960s, they did not begin building houses until the 1970s and 1980s.

The process of villagization was thus underway by the late 1970s and 1980s. Today, there are numerous Bedouin villages, hamlets and neighborhoods, which dot the Bekaa Valley. Most Bedouin villages are located at some distance from peasant villages in peripheral areas of agriculture. In fact, many Bedouin villages in the Bekaa coincide with areas that were traditionally used for summer and spring grazing. Most villages contain no or few mini-markets, no paved roads, but a handful do have their own mosque. The few Bedouin neighborhoods or rural enclaves that are part of larger peasant villages or towns are almost without exception located on the outskirts or peripheral margins of rural villages/towns. Many Bedouin registered their land either in the name of their sheikh or a Lebanese landowner. It was only in 1996 that the Bedouin were granted

Lebanese citizenship and, thus, are only now able to register newly acquired land on an individual basis.

As Bedouin pastoralists remained in the Bekaa for longer periods of time, they began developing new relationships with local dairy companies. During the early part of the century, Bedouin families made butter from sheep's milk which they sold to middle men they contacted as they moved southward down the Bekaa Valley in the spring-summer season. During the early part of May, sheep were clipped and wool was sold to merchants who entered into agreements with households. The exchange often involved payment in kind (Chatty 1972: 147). However, between 1973-74 household butter ceased to be produced and instead women began to direct their household activities to the milking of sheep and goats for daily sales to dairy companies (ibid. 154). Today, the female head of the household or the oldest daughter-in-law is usually responsible for the twice daily milking of flocks.

The replacement of camels with trucks also altered men's labor activities within the household. Young men who were previously involved in camel service⁹ now began either assisting their fathers in transporting vegetables, sheep and other items or working as agricultural/manufacturing wage laborers. The work roles of young women also changed. By 1972-73, Chatty (1972: 125) reports that new agreements were being made in which young unmarried Bedouin girls were collected by the trucks of landowners or pastoralists and taken to work in the fields and later returned to their residential camping units collectively. Young unmarried Bedouin women normally work in groups with other relatives. While Chatty (1972) does not describe the method of payment, her account

suggests monetary payment to individual girls. Today, agricultural laborers in the Bekaa are paid a daily wage of 5,000 Lebanese pounds (approx. \$3.33).

The most important change, which accompanied villagization, was the sale of livestock herds to purchase land for household construction. In oral histories, Bedouin families report selling most if not all of their livestock to purchase a small plot of land on which to build a house. With their flocks of sheep and goats now gone, Bedouin families became increasingly dependent on farming as a means of livelihood. While most Bedouin are involved in farming work as either sharecroppers or tenant farmers, a growing number of families are involved in wage labor both agricultural and agro-industrial.

Finally, with mechanization and the commoditization of agriculture, Bedouin families involved in both pastoralism and agriculture have become increasingly dependent on money. Bedouin pastoralists must pay to rent land in order to graze their flocks. Because migration to Syria is no longer part of the winter pastoral cycle, Bedouin pastoralists are more and more reliant on purchased feedstuffs (which include barley, bran, *tibn* or alfalfa, and sugar beet pulp) and vitamins in the winter. Barns or pens now protect livestock from the winter cold, and feed (as opposed to natural grasses) are increasingly used to sustain flocks. As one Bedouin pastoralist put it: "It used to be that sheep and goats ate natural grasses. Today, they eat money." Sharecropping households are also increasingly dependent on cash. When entering into sharecropping agreements, Bedouin families must also have money to purchase seeds, fertilizers and insecticides. In addition, trucks require maintenance, repair and fuel expenses. Land purchases for home construction as well as utility payments and repairs place further pressures on the

⁹ During the spring and summer, camels were rented on a daily basis by farmers in the region for transporting their harvest. Al-Faour (1968) estimates that the income derived from this rental in 1962-3

household exchequer. Continuing inflation has made it even more difficult for Bedouin families to keep pace with the expenses required for maintaining a viable household.

Conclusions

In short, the migratory pastoral cycle of Bedouin tribes and mode of production have witnessed dramatic transformations over the last century. The first major transformation occurred between the turn of the century and the early Mandate years. A political vacuum led to tribal population expansions, contractions, warfare and so on that ultimately pushed several Bedouin tribal groups into marginal agricultural areas of agriculture in the Bekaa and west towards the borders of the Mediterranean coastline. French agricultural and infrastructural development led to a major diminishment of pastures for Bedouin tribes, which paved the way towards a more sedentary form of pastoralism, involving summer contracts with peasant landowners.

The next major social transformation occurred over the last 30 years. In particular, the mechanization of transport has not only led to a more sedentary form of pastoralism, but in combination with villagization has led to an overall decline of pastoralism (due to sale of herds for land purchase), an increase in labor and merchant activities revolving around agriculture and agro-industries, and a greater reliance on money for 1) repair and maintenance of livestock and machinery; and 2) as a medium of exchange.

The next two chapters will explore how these changes have affected Bedouin households both in terms of dominate forms of production and ownership of the means of production. While important changes are visible in household forms of production, which reflect broader political economic processes, this does not mean that tribal organization

comprised one-third of the household's yearly income.

has ceased to be important. Tribal ethos continues to exert a strong influence on marriage, gender relations and Bedouin identity. Ultimately, an examination of the culture and political and economic structure of Bedouin society will provide the necessary basis for understanding if and how different forms of production impinge upon demographic behavior.

CHAPTER 3: SOCIAL ECONOMY: CLASS, FORMS, MODES AND MEANS OF PRODUCTION

In order to determine whether production shapes reproduction, we must first understand household production systems in Bedouin society. This Chapter sets out to define concepts of class, mode and form of production and examines the dominant household forms of production in Bedouin society. The discussion highlights social relations of production, particularly the absence of class-stratification *within* Bedouin society. While there are no social classes *within* Bedouin society, there *is* economic inequality. Further, economic inequality within Bedouin society shows signs of structural permanence. The last section, Section 3.3, examines in greater detail the absence of class relations within society and the presence of class tensions at broader scales, particularly between the Bedouin and Fellah.

Section 3.1 Class, Forms and Modes of Production

There are some attempts to define and refine the concept of class and modes of production in political economy. Marx's writings provide the underlying basis for theoretical conceptualizations of class. However, there have emerged two distinct definitions of class employed in the anthropological literature. The first is perhaps best termed the "vulgar materialist" definition of class, while the second can be referred to as the "structural Marxist" definition of class which provides a more restricted and rigorous

usage of class--one that rests more squarely in the Marxist tradition. The “vulgar materialist” definition of class ultimately rests on specifying ownership of the means of production so as to separate “haves” from “have-nots”. Differential ownership of the basic means of production establishes categories of “economic class”. Various gradations of “class” can then be established by arbitrarily dividing people into groups along a propertied and propertyless continuum. Under a more restricted definition of class, differential access to the means of production does not necessarily imply the existence of class groups.

Under structural Marxism, effectively utilizing the concept of class means that three major criteria must be met or established (1) capitalist labor exploitation (2) social reproduction of exploitative class relations; and (3) class consciousness/tensions. Thus, following Dupré and Rey (1982) a more rigorous definition of class reads: *the presence of exploitative social relationships where use of a surplus product by a group which has not contributed the corresponding surplus of labor reproduces the conditions of a new extortion of surplus labor from the producers. Such exploitative labor relations are accompanied at least in part by class consciousness or class tensions.*

Without meeting such criteria, there is no underlying theoretical rationale for characterizing such groups as “classes”. Socio-economic relations which are not “class” relations are either indicative of noncapitalist modes of production or consist of the articulation between capitalist and noncapitalist modes of production. Under the capitalist mode of production, the fundamental economic relationship is constituted by the free laborer’s sale of his labor power, whose necessary precondition is the loss by the direct producer of ownership of the means of production (Marx 1967; Laclau 1977).

Of course, one may refer to “noncapitalist classes” or “proto-capitalist classes”; however because Marx largely elaborated the concept of class to describe exploitative relations and group ideology under capitalist mode of production, it can lead to confusion and important disagreements by using the concept to refer to alternative modes of production. Stratification, rank and caste do not imply the existence of class groups. I utilize class according to the more limited definition referred to above. Thus, if the criteria or conditions for effectively utilizing the concept of class are absent, class is no longer a theoretically appropriate concept. Marx clearly recognized the existence of different modes of production.

Mode of production is a systemic concept which refers to the mutually coordinated articulation of 1) a determinate type of ownership of the means of production; 2) a determinate form of appropriation of the economic surplus; 3) a determinate degree of development of the division of labor; and 4) a determinate level of development of the productive forces (Laclau 1977; Pollock 1989). In general terms, a mode of production is a systemic combination of relations and forces of production that entails a determinate form of ownership of the means of production and a determinate form of appropriation of the surplus product produced in the mode concerned. The socio-cultural form of ownership is a critical aspect since it categorically determines the manner in which appropriation of the economic surplus occurs and the degree of control the appropriator has over the productive activity of the producers.

This is not merely a descriptive enumeration of ‘isolated’ factors, but a *totality* defined by its mutual interconnections (Pollock 1989). With this totality, property in the means of production is often argued to constitute the dominant element. The means of

production refers to those elements that are combined in the actual process of production to produce specific use values (e.g., farm crops, milk, wool and so on). Laclau's definition can be used to understand different modes of production in Marx's writings (e.g., the capitalist mode of production, the feudal mode of production, the petty commodity mode of production, the slave mode of production and so on) and those identified post-Marx (the lineage or kinship mode of production, the tributary mode of production, the sharecropping mode of production and so on).

Traditionally, however, the concept has been used to identify dominant relations and forces of production at broader spatial scales: community, region, nation and so on and not determinate relations at the household level (Glavanis and Glavanis 1989:1-32). The definition of mode of production is also used to refer to long periods of history. For example, Kahn and Llobera (1981) define mode of production as the dominant form(s) of social and technical organization of economic production at a particular historical juncture. The authors discuss a variety of historical modes of production based on both technology and the structure of social relationships. Examples of historical modes of production include hunter-gatherer with very simple technology and common ownership; ancient, with more advanced technology and slavery; feudal, with simple technology and landowning lords and bonded serfs; and capitalist with sophisticated technology, private ownership of capital and a wage system.

Friedmann (cited in Glavanis and Glavanis 1989) recognized the importance of scale and the need to differentiate "form of production" from "mode of production". Mode of production is used describe the totality of production at broader historical and

spatial scales, whereas the form of production refers to these relations at the household level. Friedmann defines forms of production as:

relations and forces of production (machinery and techniques) at the level of the productive unit, or enterprise [household]. The form of production is doubly defined by the internal relations, both social and technical, of the productive unit.... although the enterprise is the site of the labor process, its external relations (within the mode of production) enter into the determination of both the social and technical relations of production (cited in Glavanis and Glavanis 1989: 23).

Friedmann's concept is an important refinement because it recognizes the crucial role of household relations in organizing and in turn being constrained by broader spatial and historical modes of production.

The concept of form of production includes a recognition the following:

forms of production are more variable and transitory than the modes of production which provide their conditions of existence, but the variation is of two basic types. First is the form of production which constitutes the "basic cell" of the historical epoch, and whose dynamic underlies the laws of motion of the economy as well as deriving from it...the second type is a form of production dependent on the mode of production but not constitutive of it (cited in Glavanis and Glavanis 1989: 23-24).

Friedmann utilizes the above conceptual-empirical distinction in her work on family farms in America. In doing so, she is not forced to conceptually analyze American family farmers at the household level simply via the broader capitalist mode of production. Focusing instead on the internal dynamics or logic of these households themselves, Friedmann largely characterizes the forms of production as non-capitalist, given the lack of capitalist class relations within these enterprises. The labor process is

governed generally by the gendered division of labor, kinship obligations, and patriarchy. Friedmann describes how the simple commodity production enterprise dispenses with the category of profit as a condition of reproduction, and replace the inflexibility of the wage with a flexible cost of personal consumption.

Thus, Friedmann's conceptual distinctions allow for the analysis of family farming at the level of the household *and* at the level of the wider economy without collapsing one into the other. In some ways, Friedmann's analysis is reminiscent of Chayanov who emphasized that many peasant households were not capitalist and hence might be better described as constituting a peasant mode of production.

Anthropologists have become increasingly interested in households and their histories. It is generally agreed that households are defined by shared tasks of production and/or consumption, regardless of whether its members are linked by kinship or marriage (Carter 1984: 45). Wilk (1989) likewise defines the household as consisting of a set of social relations and practices that govern the allocation of labor activities and the distribution of the products of labor (p. 27).

Attention to social relations of production is crucial to understanding households and their histories. Research among the Bedouin revealed that class relations do not exist *within* the community (for a discussion see the next section entitled *Class Differences as Moral Differences*). Class exploitation and tensions are prevalent among Bedouin and fellah (peasants) in the Bekaa Valley, but not within Bedouin society. Attention to scale is crucial, for while capitalist class exploitation/tensions may exist between cultural or social groups at broader regional or national levels this does not mean they accurately characterize social relations within different cultural or ethnic communities. While

capitalist classes as defined above do not exist, there are distinct forms of production within Bedouin society.

Within Bedouin society, there are three major household forms of production: sharecropping (*sheerak*); independent pastoralism or shepherding (*tarrash*) and agricultural/manufacturing wage labor (*fa'il*). The different forms of production within Bedouin society are depicted in Figure 3.1. Most Bedouin households are involved in sharecropping (41.4%). Roughly one-fourth are involved in pastoralism and wage labor, while the remaining five percent work in other miscellaneous occupations as shopkeepers, government employees, and so on. The social relations and forces of production¹⁰ that characterize independent pastoralism, sharecropping and wage labor in Bedouin society will be examined next.

Independent Pastoralism/Shepherding

Pastoralism as practiced by Bedouin in the Bekaa today can be defined as private ownership of herds of sheep and goats with heavy reliance on rented grazing land and purchased feedstuffs. Bedouin pastoralists largely acquire livestock through inheritance and sometimes purchase from the market. There are historical examples of labor sharing or shareherding contracts (partner contracts, normally two to five years in duration, in which Bedouin provide labor and nonBedouin Lebanese peasants provide herds, which are then evenly divided at the end of the contract) in the Bekaa. However, such contracts were only found among two households at the time of the survey in 2000. The Bedouin

¹⁰ Social relations of production refer to patterns of labor use and access (Kelley 1994: 62-63), while the productive forces or technical means of production include both the “instruments of labor” (e.g., machinery, beasts of burden, canals and so on), the “objects of labor” (e.g., crops, livestock, milk, cheese,

predominantly rely on family labor for herding. However, some households do rely on hired Syrian Bedouin labor for herding at the beginning of the family life cycle when labor is scarce. In terms of ownership of the means of production, it is invariantly the case that livestock (sheep and goats) are privately owned.

The sexual division of labor among pastoralists reflects complementarity and interdependency among men and women. Men are usually responsible for grazing the livestock, purchasing feed, and transporting livestock. Bedouin women (and children) are responsible for setting up the tent, roping the herds and milking them, as well as preparing yogurt and cheese for household consumption. It is not uncommon for adult women and children to graze flocks. Bedouin pastoralists largely rely on the income derived from daily sale of milk to dairy companies who purchase milk by the liter. Bedouin are thus tied to the larger capitalist system because the price of milk is controlled by local and regional markets. In the spring, pastoralists shear the sheep and sell the wool to individuals and local mattress making factories.

Although Bedouin pastoralists have control of the means of production in terms of livestock, grazing land is usually secured through contracts with peasant landowners. Bedouin pastoralists are semi-sedentary and access to grazing land in the summer (June-September) and spring (March-May) is largely secured by legally-binding paid contracts (oral not written) with peasant landowners. That is, Bedouin livestock owners in the summer pay per dunum to graze their flocks on the stubble left after crops are harvested (the price of harvest yieldings is determined by harvest crop). In the spring, families pay to graze on natural grasses on the tops of mountain (which are owned by Lebanese

timber and mineral wealth) and “labor power” (the knowledge, techniques and task organization needed to produce something of value utilizing both instruments and objects) (Shaw 1978: 10-20).

peasant landowners). Some of the land on mountain slopes is not individually-owned but government-owned and thus pastoralists can sometimes graze their flocks in the spring at no cost. In the winter and sometimes in the spring, the Bedouin rely on purchased feedstuffs (alfalfa, sugar beet pulp and so on) the prices of which are determined by national and international grain prices. Bedouin pastoralists place their flocks in small make-shift barns in the winter to protect them from the cold and rainy winter season. Bedouin pastoral households, on average, move twice per year—once in the summer and once in the spring. They have combined dwellings (i.e., tent and stone/cement house). Households migrate as a unit; spouses are almost never separated for more than half a day during each move. Bedouin marriages are highly stable (see Chapter 5).

Sharecropping

Most Bedouin households are involved in sharecropping (even Bedouin families who own land have such miniscule holdings that they are still involved in sharecropping). Sharecropping is an agricultural form of production, which Marx perceived as being a transitional arrangement between feudalism and capitalism (1981: 938-950). Historically, Marx's conceptualization of sharecropping has been refined since historians have demonstrated that sharecropping existed in social formations where neither capitalism nor feudalism existed (Tamari 1983) and that it continues to exist side by side with the capitalist mode of production (Pollock 1989). The type of sharecropping (*sheerak*) found among Bedouin households can be defined as a shared investment by the landlord and tenant farmer in which the former acts, mainly, as a passive partner. The landlord provides the land and water, half of all the other inputs

(seedlings, fertilizers, pesticides), while labor (harvesting, weeding and so on) is solely provided by the tenant. Machinery is sometimes provided by the landlord and sometimes rented. Each party receives half the net marketed yield.

Unlike pastoralism, the basic means of production are not owned by the direct producers. In sharecropping, juridical ownership of the land resides not in the hands of the direct producer but in the hands of the non-laborer. This is invariant. The cropper never has legal ownership of land. Further, it is juridical ownership that legitimates the landlord's power over his sharetenant (Pollock 1989). The power has its base in the political-juridical structure of the state, which sustains this power through property and contract law. Farm water supply is almost always provided by artesian wells owned by landlords and private individuals.

The landlord who does not own a well rents water rights from other landlords or private individuals. Most sharecroppers use tractors and accessories, which are usually rented. In terms of renting equipment, sometimes the sharecropper pays and sometimes expenses are shared. Other inputs such as pesticides, fertilizers and seedlings are equally divided among both parties. Labor is, of course, the property of the sharecropper and his family. The juridical ownership of the means of production is represented in Table 3.1. From the table we can see that juridical ownership of the means of production is subject to *diffuse* ownership between landlords, sharecroppers, and rentiers. Pollock (1989) points out a major feature of sharecropping production: there is no generalized capitalization of the most costly equipment (p. 107).

Table 3.1: Juridical Ownership of the Means of Production in Sharecropping*

Ownership of the Means of Production	Landlord	Tenant	Shared	Rented
Land	X			
Water	X			X
Machinery				X
Seedlings			X	
Insecticide & Pesticide			X	
Labor		X		

Source: Pollock (1989)

In the capitalist mode of production, economic possession or real economic ownership of the means of production are concentrated in the hands of capitalist and their agents, who economically control and direct (manage) all the inputs into the labor process: labor, objects of labor and instruments of labor (Pollock 1989: 107). That is, capitalists attempt to control the work of the laborer, the quality of the object of labor, the instruments of labor and the pace of labor. The aim of this control is to produce commodities as quickly as possible and to use labor to maximize production. This is because under capitalism labor is the source of surplus value. The capitalist mode of production is thus marked by control and direction of the labor process by capitalists who hope to produce commodities as quickly and cheaply as possible so that the rate of surplus value can be maximized (ibid.).

Economic control of the labor process by landlords is not complete under sharecropping in the Bekaa and other parts of the Middle East (Pollock 1989). That is, the landlord does not control and direct all aspects of the labor process under sharecropping. Thus, if following Pollock (1989), we draw up a table of real economic

control of the means of production, the laborer would have real economic and managerial control over the major aspects of the labor process. This means that the sharecropper controls work tempo and schedules, labor time and intensity, and crop cycle (within ecological constraints) and fertility (Pollock 1989: 108). The landlord does not have absolute economic and managerial control of the means of production under the sharecropping form of production (ibid.).

Pollock (1989) compares sharecropping as a mode of production to the “putting-out system” that was common among artisanal labor in Europe during the historical transition from feudalism to capitalism. Under the “putting-out system” the artisan provides labor and means of labor (machinery, tools and equipment), while the merchant provides the objects of labor (raw materials or unfinished products). The similarities between the two modes of production entails only juridical ownership and economic control. The method of appropriation of the economic surplus from the direct producer differs between the two modes. In the putting-out system, the artisan is paid a piece rate for the job, while under sharecropping, the household is given a portion of the crop (Pollock 1989: 109).

In terms of the division of labor under sharecropping, there is a great deal of cooperation among members of the household. The gendered division of labor is such that men normally do the ploughing and harrowing, while other work is shared between men and women. Women and children tend to do the weeding. Sharecropping and pastoralism as forms of production do not exist in isolation from broader external relations of which they are a part.

In the contemporary situation in the Bekaa Valley, crop production is dominated by commodity production. Pollock (1989) examines how commodity production constrains subsistence production under sharecropping. Subsistence production is minimal to sharecropping because the landlord contractually specifies the use of available land, and it is not in his economic interests as a landlord to have a portion of his land used for family subsistence production (Pollock 1989: 115). Specialization in the production of particular commodities is virtually inevitable once production comes under the sway of the market, since it is only by specialization, particularly on smaller farms, that farmers can achieve limited economies of scale (ibid.).

However, in the Bekaa sharecropping is not limited to specialization in vegetable crop production. Wheat and barley are still important staple crops in the Bekaa, particularly due to drought over the last several years. Nevertheless, in the Bekaa Valley, we can discern a trend associated with the extension of commoditization from the early 1970s on with the introduction of new production techniques, which made the farm economy more dependent on market pricing factors/controls (rising costs of seeds, fertilizers, insecticides and so on) (Daher 1992).

Sharecropping is largely dependent on a pricing system, which is largely determined at the international level (Pollock 1989; 116; see Daher 1992). Thus, once the researcher examines broader forces or to borrow a phrase from Vayda (1984), engages in “progressive contextualization” we see that the capitalist mode exerts powerful control over sharecropping mode of production. However, this does not simply “cancel out” sharecropping or the control of the sharecropper at a finer scale. It does, however, place constraints on the sharecropper’s control. Thus, what we have is a

combination or articulation of capitalist and noncapitalist (sharecropping) mode of production in the broader regional economy.

Agricultural and Manufacturing Wage Labor

Wage labor (*fa'il* or *oujra*) as a household form of production is perhaps the most well understood. Wage labor is clearly tied to the capitalist mode of production via sale of free labor. Wage laborers are the true rural proletariat divorced from the means of production—that is, the wage laborer is legally alienated from the means of production. In my sample of 66 wage labor households, 79% are involved in agricultural wage labor, while 21% are manufacturing wage laborers (mostly chicken factories, cheese factories, and packaging companies). The price of labor within the agricultural system is determined by the market. The gendered division of labor is more varied, and more fragmented within wage labor households. Women either work with other female relatives as agricultural laborers to help supplement the husband's income or stay at home. Although not uncommon, women and children do not normally work alongside their husbands.

In the case of households that rely on manufacturing wage labor, women remain at home and perform domestic work. While wage laborers are the poorest in terms of ownership of the means of production (see Section 3.2), there are subsidiary or supplementary forms of production among wage laborers. The underground economy and petty trade seem to provide important venues of economic activity for struggling wage laborers. Buying cheap commodities in one local market and selling high in another market can help families turn a quick profit to purchase much needed household goods.

One couple described their activities in the underground economy as a necessary subsidiary form of production to their work as wage laborers. At one point in recounting their black market activities, the woman in the couple paused to take-in her surroundings. She then said in true Wallersteinian fashion “My dear, work in wage labor does not build a house”.

While I have provided a general overview of the major forms of production in Bedouin society, little has been said about ownership of the means of production, which is said to comprise the dominant element in modes and forms of production. The next section examines wealth ownership in the means of production in detail.

Section 3.2 The Means of Production as the Dominant Element in Forms of Production

Forms and modes of production are defined as totalities or by the interrelationships of their components. However, because property in the means of production is often argued to constitute the dominant element in this totality, it will be given further consideration. The extent of concentration in the ownership of the means of production in Bedouin society can be derived from Table 3.2. Table 3.2 depicts differences in animal and land ownership in the sample as a whole. The majority of Bedouin (56.9%) do not own sheep or goats, while 71.1% do not own land. Of those who own livestock and land, Tables 3.3 and 3.4, depict the size of household herd and landholdings respectively. Generally, Bedouin estimate that a herd of at least 150 is needed to support a family of five to six, thus less than half of those who own livestock (42.7%) have a herd adequate to support a sizable family. Of those families who do own livestock, the average number of sheep and goats owned by a household is

approximately 150 head (± 190), while the median herd number is 100. Looking at the last column in Table 3.3 one gets a better indication of how skewed the distribution of livestock really is. Eight families own 32.9% of all private livestock among the Bedouin. One-third of the sample or 34 livestock owners own less than 50 head total of sheep and goats apiece. Out of the 103 families who own livestock, 20 own 56.7% of total livestock.

In terms of landholdings, Table 3.4 indicates that of the 69 households (in the total sample of 239) who own land, 75% own less than ten dunums (or 2.5 acres; one dunum equal $\frac{1}{4}$ of an acre). The mean number of dunums owned is 12.2 (± 30.1). However, as with livestock, the median is a better measure of central tendency and the median number of landholdings is two dunums (or .5 acres). This is indicative of the land parcelization that is a broader problem affecting both peasants (Daher 1992) and Bedouin tribes in the region. However, while the Bedouin are land poor, over 80% of those in the sample own the land on which their house sits (the average size of this parcel being 80 meters).

While livestock and landholdings are the major means of production in Bedouin society, it is possible that households may have sold their herds in exchange for other forms of capital. Bedouin sharecroppers, herders and laborers may possess other forms of capital such as pick-up trucks, tractors, motors, and so on, which are important instruments of labor. Thus, in order to account more fully for the basic means of production, I created an index of total wealth in the basic means of production following Sheridan (1988). The most important means of production in the Bedouin's agropastoral economy—productive land, livestock, and machinery (including

vehicles)— are given in Appendix B according to their approximate value in Lebanese pounds¹¹.

Table 3.5 contains the Indices of Total Wealth in the Basic Means of Production for every surveyed household and provides a systematic base for comparing household access to the basic means of production among the Bedouin of the Bekaa. Distribution of the basic means of production is skewed. Forty-four households, more than one-sixth of Bedouin households in the survey, have indices of total wealth equal to zero. In other words, more than one-sixth of Bedouin households in the Bekaa Valley lack access to productive land, livestock, and machinery.

Less than one-sixth (14.6%) control 42.4% of total wealth in the basic means of production; the remaining 57.6% of the total wealth is controlled by 67% of the population. The mean index of total wealth in the basic means of production for the sample, 9007, indicates that the average value of a household estate among Bedouin in the Bekaa Valley is 9,007,000 Lebanese pounds (approx. U.S. \$ 6,004). The richest household in the sample has an estate valued at 69,500,000 (U.S.\$ 46,333). Of 195 families who have some access to the basic means of production, the mean wealth index is higher at 11,039 (± 9700.8). The median wealth is approximately 9,000 (9,000,000 Lebanese pounds or approximately \$6,000 USD). Of 195 households with access to the means of production, 44% have a wealth index in the 7,000-11,999 range, and 48% have a wealth index between 5,000-13,999.

Another common way of looking at the degree of concentration of wealth is to divide sample households into quintiles (i.e., so that roughly 20% of households are in each category) and then determine the percentage of wealth owned by each quintile.

¹¹ One US dollar was equal to approximately 1,500 Lebanese pounds in 2000.

Figure 3.2 reveals the distribution of total wealth in the basic means of production with households divided into quintiles. The richest 20% of households control about 50 times more of the means of production than the lowest quintile or poorest 20% (who own approximately zero percent of total wealth). The bottom 40% control only four percent of total wealth, while the top 40% control 77% of total wealth.

In order to compare the Bedouin of the Bekaa with other societies in the world and to obtain a summary measure of overall concentration in the ownership of productive wealth, a Gini coefficient for total wealth was calculated. Economists have devised several ways for comparing the degree of economic inequality with a single index number. The most popular of these is the Gini index (or coefficient or ratio or number). In a society with perfectly equal wealth distribution, the cumulative share of wealth would be equal to the cumulative population share. So that each quintile in Figure 3.2 would be equal to 20%. Such a mythical egalitarian society would have a Gini index of 0.000.

The higher the Gini the more unequal the distribution of income. In a perfectly unequal society in which one unit (person or household) had all the income, the Gini value would be 1.000. In practice, the Gini usually falls between .200 and .600. While the Gini has some drawbacks in that it is sensitive to both extremes of the wealth distribution (both rich and poor), its widespread use among social scientists (Galt 1980; McGuire and Netting 1982; Sheridan 1988) allows for some useful societal comparisons.

The Gini for the Bedouin of the Bekaa is .523. Table 3.6 summarizes Gini coefficients for different communities. The Gini among the Bedouin is lower than that

found for the agropastoral community of Cucurpe in Northwest Mexico but higher than that of Törbel, Switzerland (see Table 3.6). Among the lowest Gini coefficients reported in the anthropological literature are those in Sarakantsani, Macedonia (.22) and Chiapas, Mexico (.32). So concentration in the ownership of wealth among the Bedouin of the Bekaa Valley is moderate-high.

TABLE 3.6: GINI COEFFICIENTS FROM VARIOUS COMMUNITIES*

COMMUNITY	GINI COEFFICIENT
Bedouin of the Bekaa Valley, Lebanon	.523
Cucurpe of NW Mexico	.687
Torbel, Switzerland	.343-.495
Sarakantsani, Macedonia	.22
Chiapas, Mexico	.32

**Source for nonBedouin groups: (Sheridan 1988)*

While the Gini coefficient is a decent measure of inequality in wealth ownership within Bedouin society, it underestimates the level of inequality in wealth ownership between the Bedouin Arabs on the one hand and nonBedouin Arabs since measures of wealth do not include Arab peasants in the Bekaa who in conjunction with absentee landowners mostly residing in Beirut own the majority of land and livestock (in large ranches) (Daher 1992). Thus, economic inequality exists among the Bedouin of the Bekaa. However, the calculated Gini does not measure inequality between Bedouin and Fellah.

Further, we have not yet examined whether form of production predicts ownership of the means of production in Bedouin society. Table 3.7 shows the average and standard deviation of ownership in the means of production as determined by forms of production. Mean differences between the groups are statistically significant

($p < .001$). The greatest share of total wealth (49.9%) is controlled by shepherds, followed by sharecroppers who control 35.6% of the total wealth. Wage Laborers, who constitute slightly more than one-fourth of the population, only control 9.6% of the wealth¹². Overall, form of production predicts 29.8% of the variation in ownership of the means of production. In calculating post-hoc Bonferroni statistics to determine which group differences contributed most to overall observed differences, all forms of production were found to be statistically different from one another ($p < .05$) and thus all contribute to the observed differences (see Table 3.8).

While economic inequality exists, it is important to remember that form of production involves rules of access in addition to ownership of the means of production. That is, *ownership* of the means of production is not synonymous with *social access* to the means of production. The central requirement or social condition for entering into a sharecropping agreement for the tenant is labor power. Hence, sharecroppers through their labor power are potentially able to socially secure access to the means of production necessary for both social and biological reproduction.

Out of 44 Bedouin families who do not have access to the means of production (see Table 3.5), 14 are sharecroppers. Thus, 31.8% of those who do not *own* the means of production, still have *access* and *control* over the basic means of production in the agropastoral economy. And in overall Bedouin society, 67% of households (pastoralists and sharecroppers combined) have some social access to the basic means of production.

¹² Differences within groups are not negligible. If we calculate the coefficient of variation (standard deviation/mean) for each group, we find that shepherds and sharecroppers have similar coefficients: .74 and .77, respectively, while wage laborers have a coefficient more than twice as high at 1.7, indicating that the greatest variation within groups exists among wage laborers. However, this does not detract from the point that differences between groups are still greater than differences within groups.

Oral histories, however, do indicate that the duration of sharecropping contracts began to change in the 1980s. That is, Bedouin sharecroppers increasingly complain that recent contracts are of shorter duration than those in the past. Bedouin farmers state that five-year contracts with peasant landowners were not uncommon. However, recently contracts rarely exceed one year in duration and thus must continually be renegotiated. Thus, it does appear that the Bedouin face increased disadvantages in negotiating sharecropping agreements.

Oftentimes discussions within political ecology or political economy do not carefully consider the *meaning* of economic differences or coefficients of inequality. A more systemic or holistic understanding of forms or modes of production in their historical and spatial context are central to attempts to theorize inequality. Further, economic inequality does not imply social or political inequality as argued in Chapter 4. However, before examining the tribal socio-political structure of Bedouin society, the extent to which economic differences are structural will be briefly examined.

Inheritance as a Form of Structural Inequality among Pastoralists

While most Bedouin are involved in sharecropping, there are still a substantial number of Bedouin families (62) involved in pastoralism. Many anthropologists have pointed out that economic inequality does not by itself lead to stratification. The crucial question, according to Galaty (1999) “is whether observed [economic] differentiation is ephemeral or exercises long-term, structural effects” (p. 48). Among the Yomut Turkemen of Iran, wealth differences tend to even out with time. Does the same cycling of wealth occur among Bedouin pastoralists? First, as mentioned earlier, pastoralism as

a form of production is increasingly being threatened as land privatization, land scarcity and villagization continue to encroach on pasture lands.

Most Bedouin families who rely on pastoralism are older. Inheritance of livestock at marriage is increasingly being replaced by monetary assistance. However, most older couples obtained livestock at marriage. While many of these older couples sold their livestock to cover the costs of household construction or converted them into other forms of wealth (i.e., trucks, cows and so on), many families still maintained some of their livestock holdings. Hence, I decided to examine the effects of livestock inheritance at marriage on livestock holdings and overall wealth in the means of production at the time of the survey among 65 women 40 years and older. Out of 65 couples, 63% inherited sheep and goats at the time of marriage. The median total herd size at marriage was 23.5.

Inheritance of livestock at marriage (obtained from survey interviews) among older Bedouin couples was found to be an important predictor of livestock wealth and overall wealth at the time of the survey. Using MANCOVA to examine the effects of livestock inheritance at marriage on livestock ownership at the time of the survey (with marriage duration as a covariate), a statistically significant association was found between the inheritance of sheep and goats at marriage and at the time of the survey ($F= 22.9$; $df=1$; $p < .001$). The results show that inheritance of livestock at marriage predicts 29.0 % of the variation in livestock holdings at the time of the survey. MANCOVA was also used to examine the effects of marital inheritance of sheep and goats on overall wealth at the time of the survey.

Similarly, marital inheritance of livestock is a significant predictor of overall wealth in the means of production at the time of the survey ($F=26.6$; $df=1$; $p<.001$). Inheritance at marriage predicts 30.6% of the variation in wealth in the means of production at the time of the survey. What does this imply? It implies that economic wealth among pastoralists display signs of structural permanence. This is probably due to the fact that livestock numbers are likely to be much more stable among more modern sedentary pastoralists with access to purchased feedstuffs, vaccines, and barns to counteract the effects of ecological stress. In addition, by converting livestock wealth into more durable forms of wealth (i.e., trucks and land), some households were able to increase their ownership of the basic means of production.

While the first two sections provide an overview of forms of production and ownership in the means of production, little has been said about the character of social relations. Economic inequality is present within Bedouin society, but such inequality has not led to social classes. A detailed look at class in the last section shows that while class relations may be absent at one level, they may still be operative at different scales of Bedouin sociality.

Section 3.3: Class Differences at Different Scales

Kreager (1986) in his essay on “Demographic Regimes as Cultural Systems” observes how entire social groups frequently define themselves as observing a certain morality with regard to sex, the treatment of bodily substances, reproduction, marriage practices gender relations and family formation. It is these practices and institutions (i.e., those surrounding family-building) that often serve to differentiate “us” from

“them”. While Kreager does not mention how exploitative class relations can influence such cultural perceptions of difference, some anthropologists and historians have.

The persuasive writings of Said (1978) do suggest that the West defined itself in large part against the Orient. Also, within Western societies, less privileged classes were perceived as being morally different and inferior. The principal criteria used to differentiate classes were criteria of sexual right and wrong. This is amply demonstrated in the European-born science of population founded by Thomas Malthus at the end of the eighteenth century. Malthus argued that the poor classes were poor because of their sexual licentiousness and “early and improvident” marriages (see Meek 1954).

Schneider and Schneider (1996) have little difficulty applying Kreager’s thesis to classes in Mediterranean Europe. That is, they demonstrate that once vital processes within cultural systems are established as a pattern they: “become objects of cultural interpretation, by which people identify themselves with particular groups, and contrast their behavior to others” (1986: 153-155). In Villamaura, Sicily, class formation sparked both demographic and moral difference within the community. When members of other classes were asked to explain why high fertility persisted among the class of landless peasants, they responded with expressions that linked poverty to progeny and sex. One expression in particular lent itself to the title of the book: “sexual embrace is the festival of the poor” (Schneider and Schneider 1996: 11).

What about non-European peoples? In nonWestern societies, are cultural lines of difference drawn between social groups on an axis of sex, progeny and poverty? Said (1978) may have paved the way for understanding Western colonial subjectification

and marginalization of the “other” but acknowledges that he provides little insight as to what Middle Eastern (or other nonWestern) peoples and cultures *are* like. Demographic differences *within* the Bedouin community are not attributed to moral differences between social groups or forms of production. Due to the egalitarian political and social structure of Bedouin society (see Chapter 4), there is virtually no discussion of moral difference of any kind.

In the 240 interviews conducted with women and 108 of their spouses, no one mentioned any kind of social or moral differences between forms of production. When asked if they would allow their children to marry a member of a different form of production or a poorer Bedouin, families almost always replied in the affirmative. However, in terms of broader Bedouin-peasant relations, there are culturally salient differences which while related to class exploitation and distinction are not reducible to them. Unlike Europe, however, class tensions between Bedouin and Fellaḥ in Lebanon are not culturally articulated in the idiom of poverty-sex-progeny, but in idioms of religious and linguistic difference and moral honor or virtue.

The Bedouin are commonly described by peasants as being “irreligious” and “unclean”. Cleanliness has clear religious connotations in that Muslims must always ritually cleanse themselves before prayer. Peasants frequently remark that Bedouin who come to pray at the mosque are “dirty”. Scriptural Muslim purists also fault the Bedouin for their lack of devotion to daily prayer in general. Bedouin tattoos are also seen as an important cultural marker of religious blasphemy.

Tattooing was a common cultural practice among Bedouin tribes in both Syria and Lebanon. Among Lebanese Bedouin, tattooing appears to have had symbolic

significance as a marker of intertribal differences and as a form of cultural adornment (particularly facial tattoos which young unmarried Bedouin women had done by gypsy women). Hand Tattooing is sometimes undertaken as a medical treatment for joint or arthritic pain. Older Bedouin women still bear facial tattoos (and older men and women have tattoos on their arms or hands).

The important point is that tattooing is strictly prohibited in Islam and serves to reinforce Bedouin religious unorthodoxy. Over all, the Bedouin are scorned by peasant smallholders and large capitalist landowners for their religious laxity or their tribal unorthodox and unorganized version of Islam. Other cultural cleavages, which figure prominently in peasant discourse, portray the Bedouin as “liars not to be trusted” and “difficult to understand”. While the former establishes the Bedouin as morally and reputationally suspect, the latter differentiates the Bedouin on the basis of their dialect, which bears linguistic differences to spoken Arabic and local Lebanese dialects.

Thus, while class tensions and exploitation are easily discernable, social and economic difference is not morally expressed in European Malthusian language of sexual laxity and hyperfecundity. Bedouin poverty is not contemptuous in and of itself. Poverty is only indirectly invoked in discourse on bodily cleanliness, which has strong religious connotations. Similarly, the Bedouin are not scorned by peasant landowners for their high fertility. Children are highly valued in Arabico-Muslim society. The Quranic verse “children are the beautification of life and earthly existence” even attaches a sort of religious sanctity to children.

What about Bedouin perceptions of the Fellaḥ? Is there an awareness of class exploitation or class consciousness among the Bedouin? In a total of 348 combined

interviews, only three individuals referred to peasants in ways consonant with the Marxist concept of “class consciousness”. One man was particularly eloquent and described exploitation of Bedouin labor as follows: “We do the hard work, they profit...Bedouin men apply for jobs with the government and always get turned down. We are treated like sheep bred for sacrifice.”

In oral history interviews, I looked for indications of a class consciousness among the Bedouin, but what I found instead was what some Marxists refer to as “false consciousness”. And while theoretical blinders may prevent us from taking seriously social phenomena not adequately appreciated by our theories, I was not content to dismiss such an overwhelming reality.

So how did the Bedouin view peasants? How do they view their status vis-à-vis peasants? Bedouin insisted that social differences between the groups were largely dissolving. The Bedouin describe how while they used to be *Bedu ruhal* (nomadic Bedouin), they are now *Bedu hadar* (civilized, modern or settled Bedouin)¹³. That is, they now reside in villages, are sending their children to school and pray and study the Quran. Nevertheless, the Bedouin still acknowledge some important cultural and social differences. While some features of peasant life are viewed as being superior to their own, other features are rejected as unacceptable. Literacy, paved village roads, land, running water, jobs in government—all of these are aspects of modern peasant life highly coveted.

However, there are other aspects of their cultural identity, which are asserted with pride. One of the most important harbingers of identity among the Bedouin is their infamous tribal hospitality and generosity. As one man told me “ When you enter a

Bedouin house, you realize that guests are treated in a distinct way. Guests are greeted and welcomed with respect, kindness and generosity. Hospitality and honor are prized among the Bedouin.” Indeed, it is impossible not to notice the hospitality and generosity accorded to guests. The Bedouin are consummate hosts and the artful style of their greeting is enough to flatter and warm the heart of the sternest and most cynical of visitors.

Another cultural distinction the Bedouin proudly assert is their strong sense of moral honor and gender equality described in the section on Gender in Chapter 4. Honor is another defining element of tribal identity. Al-Faour (1968) documents tribal disputes over unsettled elopements (the latter is an aggressive form of marriage that is penalized among the Bedouin). Fear of retaliation on the part of the eloping lineage results in avoidance until the dispute is settled. Physical force is infrequently used to restore honor (see al-Faour 1968: 193-196). However, usually social alliances through agnatic and affinal ties, as well as territorial neighborhoods are used to create solidarity and support needed to negotiate a solution.

Perhaps the most important difference between Bedouin and Fellah is the distinct cultural heritage of Bedouin tribal nomadism itself. The Bedouin tell their children stories of pastoral lives lived on foot where camels were used to transport tents, and nomadic movements followed the seasons. They tell of how tribes united in the Badia in the springtime, how they shunned military conscription and how as Bedouin when crossing national borders they required no passports or forms of identification issued by the state. Thus, while the Bedouin see themselves as modern

¹³ The Hadramaut Bedouin of Yemen also use this distinction (Bujra 1971).

and modernizing members of society, their nomadic past remains an important source of identity and one of proud distinction.

The important point is that the Bedouin do not see their distinctions as sources of conflict or tension that prevent their participation in wider peasant society. While a distinct nomadic tribal and cultural heritage is part of their identity, the Bedouin have other parallel identities. The Bedouin recognize that their cultural emphasis on honor though slightly different in form is found in Arab society in general. But most importantly, the Bedouin have a strong sense of identity as Sunni Muslims.

Again and again the Bedouin emphasized their central role in Lebanese state society as Muslims. The Bedouin, unlike peasants, almost never acknowledged *minor* social tensions or class conflict and repeatedly insist: “We are all Muslims”. While peasants seek to denigrate, shun, and question the Bedouin as liminal Muslims, the Bedouin posit their Muslim identity as a *unifying* and *equalizing* principle of social life.

The term “false consciousness” is problematic because it implies that local ideologies which do not fit into classic definitions of “class consciousness” should be dismissed. Likewise, “false needs” posits that the mystifying veil of religion prevents people from seeing the world as it really is and is dismissible. More productive are attempts to understand exactly what indigenous peoples mean when they say “we want to be like group X” or “we want to be modern”. This means understanding the complexity of cultural identity and religious beliefs and ideology. Among the Bedouin, religion is asserted as a unifying ideology almost in defiance or in mirror opposite of peasant ideological class and religious assertions.

Conclusions

I have argued that social class relations are not apparent within Bedouin society, but characterize Bedouin-peasant relations. Yet, while there may be no classes within Bedouin society, there is economic differentiation. The question that remains is why have economic differences not translated into socio-political and moral differences *within* Bedouin society? In other words, why aren't the Bedouin more socially stratified? Anthropologists have pointed out that economic inequality does not necessarily imply socio-political inequality (e.g., Salzman 1999). The next Chapter looks at the sociopolitical institutions and cultural practices in Bedouin tribal society to help address this question.

CHAPTER 4: TRIBAL SOCIOPOLITICAL ORGANIZATION: MARRIAGE, SEGMENTATION AND GENDER

This chapter establishes the socio-political and cultural centrality of the tribal lineage system among the Bedouin. The egalitarian structure of Bedouin society can be seen from examination of marriage, kinship and overall segmentary organization. The first section, Section 4.1, examines the marriage and kinship system among the Bedouin in the context of segmentation. The second section, Section 4.2, examines segmentation as an egalitarian form of socio-political organization. Section 4.3 discusses how the gender system among the Bedouin further reinforces egalitarianism.

Section 4.1: Marriage and Kinship: Lineage Endogamy and Patrilineal Parallel Cousin Marriage

The importance of tribe can be seen in various dimensions of social life. Even the practice of naming retains its tribal character among the Bedouin. Like the famous tribes of the Old Testament, the Bedouin name their children according to salient experiences surrounding birth. The name *Rhea* is one example. As recounted by *Rhayla*, she was thus named because on the day she was born, spring was nearing its close and family members within her mother's camping unit were planning to move south. "We cannot move today, I just gave birth," the daughter recalls her mother's story. But her mother's protests went unheard, as family members continued packing up tents and other belongings. "That is

why I named you ‘Rhayla’,” the mother explained. *Rhayla* is from the Arabic root *r-h-l* which means “to migrate or move”.

Tribal organization is pivotal to understanding Bedouin society. The term *ashira* (tribe or sub-tribe) is used by the Bedouin to distinguish themselves from each other and from other structurally similar but distinct tribal groups. *Ashiras* are secondarily divided into a number of sections, which are called *fakhad* (maximal lineage). The *fakhad* is a descent group whose common ancestor is said to have been several generations removed from the living (usually the kinship relations involve fictive kinship). Each *fakhad* is sub-divided into units called *beits* (minimal lineage) who are said to be three to four generations back from the living (genealogy at this level appears to correspond to historical fact). Within the *beit*, the only named divisions are extended families of one, two or three generations, which are also called *beits*.

The basic segment of the tribe is the *beit* or minimal lineage. It is the smallest political unit, which together with other structurally similar units forms the internal organization of the *fakhad*. Oral histories indicate that legal, political and economic decisions were traditionally reached by a council of elders representing all the *beits* of the *fakhad*. The *beit* also constitutes the patrilineal descent group that used to form a residential camping unit for part if not all of the pastoral cycle. In fact, land on which Bedouin homes and villages rest today were originally purchased and founded by members of an extended family or minimal lineage.

Perhaps nowhere is the importance of tribe more apparent than in the realm of marriage. Out of 240 ever married Bedouin couples surveyed, 211 marital unions (87.9%) were between men and women of the same tribe and 29 marriages (12.1%)

were between men and women of different tribes¹⁴. Thus, in terms of the broader cultural marriage system, the Bedouin practice patrilineal tribal endogamy. Patrilineal endogamy is important at the family level as well. That is, the preferred marriage partner for women is their father's brother's son (*ibn 'amm*). This marriage pattern, referred to as patrilateral parallel cousin or *ibn 'amm* marriage, is found across the Middle East (Khuri 1970; Keyser 1974; Lindholm 1986; Moors 1989). In the sample survey, approximately 33.9% or one-third of all married couples were patrilateral parallel cousins.

The strong cultural preference for patrilateral parallel cousin marriage is expressed in Bedouin proverbs. A common proverb says that a Bedouin man can “bring down his father's brother's daughter from her *houdaj* (the marital platform placed on a camel, which was once used to carry the bride during the wedding procession).” This means that a man can prevent his patrilateral parallel cousin from marrying another even on her wedding day. *Ibn 'amm* marriage is still important today although several Bedouin point out that it is less stringent. Sometimes such marriages are accompanied by love, sometimes the men and women accept it as a moral obligation. One woman who was several years older than her husband who was also her cousin indicated: “No, we did not love each other when we married. He had to marry me and I had to wait for him since he was my *ibn 'amm*.”

¹⁴ This is a slight overestimation for two reasons: 1) During my random sample of Bedouin households in the Bekaa Valley, I encountered 3 couples in which the men were married to peasant women. Since I was interested in Bedouin fertility, I omitted these 3 couples from the study; and 2) since Middle Eastern societies are patrilocal, Bedouin women who married peasant men would reside in their peasant husband's village and would be omitted from the sample of Bedouin villages. To address the latter problem, I asked sample women interviewed whether or not their sisters and any married daughters were married to peasant men. One out of 240 women indicated that one of her daughters was married to a Fellah, while one woman indicated that her sister was married to a Fellah.

In explaining this marriage system, Bedouin women and men point out that your patrilineal parallel cousin will love and support you more than a distant relative or nonrelative. One woman explained, “Your *ibn ‘amm* takes away your worries [literally “the clouds”]. Your *ibn ‘amm* will be compassionate, protect you, respect you and support you because you are family. After all, your fathers are brothers.” That is, marriage to your *ibn ‘amm* is preferable because of your distinctive relationship within the lineage system. You are not just affines but agnates. In situations where patrilineal parallel cousins do not marry, there is usually negotiation until some kind of consensus agreement is reached by the two families. If one party does not want to go through with the marriage, a *radwah* (satisfaction) payment is made as recompense to the agnates. However, sometimes negotiations simply fall apart and hostility between family members ensues.

One woman, who was 26 at the time of the survey, recounted to me how five years earlier her father’s brother’s son was so embittered that she and her parents refused him that weeks before her wedding, he and his father fired surprise shots into their house, nearly wounding several family members. The woman’s family and her paternal uncle’s family have not spoken since the incident. Another woman in an oral history interview, described how her father was unwilling to allow her to marry her father’s brother’s son because her father was negotiating an exchange marriage instead. That is, her father wanted a bride for his son and her father’s brother did not have any daughters for exchange. (Exchange marriage characterized 10% of marriages in the sample). Ultimately, the woman’s father prevented the marriage between the

patrilateral parallel cousins and the woman's paternal uncle completely cut off ties with the woman's father and her entire family for seven years.

There have been many attempts by anthropologists to understand the meaning of this unusual marriage system, which is strictly prohibited in Central Asia (Krader 1963; Vreeland 1962; Lindholm 1986). Both historians and anthropologists have pointed out that *ibn 'amm* marriage [unlike the avunculate (mother's brother's daughter marriage)] leads to a merging of the lines of mother and father, inward growth and fission. As Peters states, parallel-cousin marriage "has the effect of diversifying the agnatic group, and creates small nuclei within" (1967: 274). Agnates are turned into affines, and potential lines of fission are thus drawn between the closest of paternal relatives. Murphy and Kasdan (1959) point out that in such a social system it is "almost impossible to isolate a solidary in-group, and groupings are continually being activated or redefined through struggles that may even pit members of the nuclear family against each other" (p.20). Such a marriage system which tends to be found in societies which practice lineage endogamy (in this case patrilineal tribal endogamy) helps to create a social order that potentially leads to either massive aggregation of agnatic units or atomistic fissioning of units (ibid. 21; see also Lindholm 1986).

While anthropologists have repeatedly pointed out how such a marriage system, which turns agnates into affines, can create potential divisiveness among paternal relatives, my research seems to indicate that fission tends to result more from *not* following cultural expectations of patrilateral parallel cousin marriage. As described in the examples above, because of the strong moral and cultural expectation or obligation of patrilateral parallel cousin marriage, in situations where the obligation is not resolved

through *radwah* or worked out to the mutual satisfaction of *both* parties, serious fission among paternal relatives is likely to result.

Section 4.2: Segmentation

Parallel to this marriage system with its divisive unity is another prominent institution at the center of Middle Eastern tribal organization. Anthropologists have long examined the segmentary model (a form of political organization consisting of a hierarchy of more and more inclusive lineages) as a core feature of Middle Eastern, Western Asian, and North African tribal society (for an illustration of segmentation among the Sanusi Bedouin of Cyrenaica see Evans-Pritchard 1949; for the Nuer of the Sudan see Sahlins 1961; for the Tiv of northern Nigeria see Bohannon 1954; for the Swasa of Morocco see Waterbury 1972; for the Swat Pukhtun of northern Pakistan see Lindholm 1981; for the Yomut Turkmen of northeastern Iran see Irons 1975, 1994; for the Sarhadi of Baluchistan in southeastern Iran see Salzman 1983, 2000). In the Middle East, segmentation is expressed indigenously in the now well-known idiom “I against my brothers, my brothers and I against my [patrilineal] cousins; my [patrilineal] cousins and my brothers and I against the world”.

Segmentation is visible at various levels in Bedouin society both historically and today. Depending on the nature of the dispute in question, different but equal segments of social organization—tribes, maximal lineages, minimal lineages, families, and even brothers—oppose one another in balanced opposition. The most influential theoretical elaboration of this concept comes from the work of Marshall Sahlins, using African cases.

According to Sahlins (1961), the segmentary-lineage system entails a lack of permanent leadership, unilineality, the replication of genealogical distance in territory, relations of “complementary opposition” between lineage segments of equal depth, and structuring of violence on genealogical grounds. Lineages are seen as relative social entities appearing only when stimulated by opposition with units of equal scale. Oral histories among the Bedouin indicate that roughly thirty years ago there were several sub-tribal feuds over spring grazing access on public lands, which united larger tribal or sub-tribal patriline. These feuds were often mediated or negotiated by outside tribal sheikhs not involved in the dispute. Feuds between minimal lineages still occur when agnates are killed and the vengeance requirement or blood right is invoked to remove ritual social pollution.

Disputes/feuds between brothers within the same nuclear family are not uncommon. One woman in my sample was widowed due to the murder of her husband by his brother (for another example of brother homicide among the Bedouin of Lebanon-Syria see al-Faour 1968: 187). The dispute actually involved the woman’s son and her husband’s brother. The woman’s son was arguing with her husband’s brother over where the flocks of sheep (which belonged to the latter) were to be grazed. The woman’s husband’s brother felt offended and insulted during the confrontation. Immediately following the dispute, he took it upon himself to avenge his personal honor by shooting his brother *and* his brother’s son.

While aggressive fighting and confrontation between brothers and other paternal relatives is quite common, fighting only rarely leads to killing. In the sibling murder, the brother who committed the murders was strongly censured by his living brothers,

other paternal kin and tribal community. The dispute was resolved through mediation by a well-respected sheikh from Syria. The brother who committed the murder ended up making a sizable payment in Lebanese pounds or *diyyah* (blood-money) to the widow and her family in compensation for their loss.

Bedouin social life thus corresponds well to ethnographic accounts of Middle Eastern and North African social structure which describe: “balanced rivalry” (Lindholm 1986), “ordered anarchy” (Evans-Pritchard 1940) and “complementary opposition” (Sahlins 1961). Within the framework of the lineage, each individual aggressively asserts their honor to demonstrate their charisma and prowess and gain the respect of fellow kinsmen and women. It is a social system of strong individualism where individual honor is articulated and tied to lineage or kinship at different levels. Perhaps most important, rank is not seen as an inherent attribute of any individual, family or tribe. There are no hierarchical status differences ratified in kinship, sociopolitical structure or discourse. Each tribe aggressively asserts their honor, virtuousness, and reputation. That is, honor is horizontally diffused not vertically concentrated.

Individuals from every sub-tribe would repeatedly assert “Our sub-tribe X is really the best sub-tribe. We are honest; we are generous and have the best reputation”. Individuals from different tribes I encountered (one tribe might be found in two or three different villages, hamlets or neighborhoods scattered across the region) often enjoyed questioning me as to which tribe I liked best. In typical fashion, I would be drinking my tea after an interview and would be asked by either a woman or man: “In learning about

Bedouin life, you have traveled and seen tribes all over the Bekaa. Tell us, which tribe do you think is the best?"

There is no socially understood ranking of tribes in Bedouin society. There is no indigenous attempt or interest in ranking tribes. Individuals always asked me this question in curious fun. Further, while individuals commonly recognize the wealthier sub-tribes (i.e., those who possess sizable livestock holdings or own land), economic advantage has not led to socially recognized status hierarchies or hierarchical differences in possession of honor. In addition, families or individuals from different tribes never put down other tribes or individuals from other tribes or described them as being socially inferior, but rather were concerned with asserting their own honor or moral virtues.

So, if no tribe is accorded or conceded superior social standing, what about political sheikhs of the tribe? Even the position of sheikh is more that of an ephemeral mediator and arbitrator than a hereditary position of superior social status. Participant observation indicated that Bedouin men and women in the Bekaa blatantly and harshly criticize sheikhs whose skills they judge to be deficient and praise others for their more adept arbitration skills. But in neither case do individuals recognize their sheikh as being of superior social rank. Their socio-political role is that of mediators with potential skills to be utilized by *all* members for solving disputes (Lancaster 1997).

This was made clear to me when one day in the spring I happened to be visiting a Bedouin woman who insisted that after my visit I continue to the tent of her close relatives who were expecting an interesting dinner guest. It turned out that the guest was none other than the Bedouin sheikhly "leader" or president of the Syrian

Confederation of Tribes and a member of the Syrian parliament. When I arrived, the guest had not yet made his appearance. Although everyone welcomed me with great kindness and enthusiasm, I was nervous and highly uncomfortable from the beginning. I felt like an intruder who had inappropriately crashed an important and private social engagement. So, I quickly indicated that I was just dropping by to say hello and would return at a more convenient time. After all, arguably the most important man or Bedouin tribal sheikh in the region was coming to dinner.

Everyone looked genuinely puzzled and asked in surprise why I wanted to leave. One of the older men asked: “ Don’t you want to ask him all the questions that you have been asking us? He knows a lot; he is well-educated ”. Missing from the situation was the fanfare and difference that I assumed would be accorded to a person of high office and social standing both within and outside the Bedouin community. While customary Bedouin hospitality and generosity did include a large *ghada* (major afternoon meal served at around 2 pm), there was no exclusive ritualized or unusual flourish attached to his visit, sheikhly status or parliamentary title. I waited to be politely dismissed, but it never happened.

Individuals from wealthy or poor families rarely used wealth or sheikhly office to judge or evaluate individuals or other patriline. I was always amazed by the almost total absence of rank or ascribed status attached to individuals or families. And perhaps most surprising was the individualistic or personalistic manner in which potential suitors are evaluated. Specifically, when evaluating potential suitors for their daughters (often within the confines of lineage) Bedouin parents often judge potential marriage partners on the basis of personal attributes and charisma.

Economic wealth is rarely among the primary or sole criteria used to evaluate a male suitor. An example from my stay with one Bedouin family who had a young daughter approaching marriageable age illustrates this clearly. One afternoon, a young bachelor of the same tribe paid a social visit to the family. The bachelor-visitor also happened to be the son of a well-respected tribal sheikh. After he departed, a friend of the daughter's and I began teasing her about the young bachelor. I pointed out that the man was from a family of comfortable means, was of the same age as her and quite handsome. Shortly afterwards, I left the daughter and her friend to join the mother who was sitting in the outside garden. In discussing marriage and family life with Shamsa who spent most of her life working as an agricultural wage laborer (with her husband), the conversation turned to her unmarried daughter. I asked her to tell me what she thought of their male visitor that day as a potential suitor for her daughter. I soon discovered to my genuine surprise at the time that the mother was not impressed with the sheikh's son. When I asked "Why is he not a good suitor?" Shamsa explained with a dismissive sneer on her face:

He does not have *jazbeeyi* (charismatic personality) or conduct himself skillfully in conversation in the *majlis* (assembly/gathering/council). You saw and heard him when he was sitting around the *mangal* (coffee-brazier) with the other visitors. He did not speak with charm or skill, he was silent...yes, his father is well-respected and he is from a family with a good reputation, but he is an individual with a flat personality.

Perhaps it is not surprising that the Bedouin famed for their rich poetry, oral tradition and strong individualism, continue to place such high cultural importance on personalistic charm and oratory skills. Eloquence, social adeptness in conversation,

personal flair and social charisma are highly valued. Individuals within a lineage system are thus not simply judged by their wealth, but family reputation *and* personalistic qualities.

In some sense, Bedouin Middle Eastern tribes might even be considered more egalitarian than African segmentary tribes. An important social difference between Middle Eastern and African segmentary tribes is that ranking in terms of age-sets is absent in Middle Eastern tribal society. The social institution of age-sets is widespread among African tribes (Spencer 1965; Dyson-Hudson 1966; Schneider 1979; Spear and Waller 1993). While there is equality within age-sets, there is inequality between age-sets. That is, there is a moral responsibility that junior age-sets show respect for senior age-sets (Spencer 1994). There are no such pre-existing hierarchies in Middle Eastern social structure. Thus, not only are chiefly political offices with coercive control lacking in Middle Eastern tribal political structure (Irons 1994), social hierarchies which imply gerontocratic control are also conspicuous by their absence.

Perhaps most of all, egalitarianism is seen in both the small and large details of daily life. The Bedouin all sit together, usually in a circle on futon-like mattresses placed on the floor (see Figure 4.1 for a picture of Bedouin floor seating). It is customary to sit close together with arms often propped up on a shared pillow so that one cannot help but rub elbows with the person seated next to him or her. It is perfectly acceptable to rub elbows even if one is seated adjacently to a sheikh or elder male of a family/lineage (see Figure 4.2 for a picture of a Bedouin tribal chief (sheikh) next to whom I am seated). This was quite a dramatic difference from seating arrangements in peasant households. Most notably, the male head of the household requires sufficiently

more social space. Although peasant men and women do frequently sit together, they usually sit on opposite sides of the room. It is also almost invariably the case for the peasant male head of household to eat first or alone. This practice is not as widespread among the Bedouin. It is more common for all members of a family to eat together and men and women as well as children frequently share the same plate or bowl.

Thus, while in peasant society, the patriarch commands greater respect and authority than other members of the household, in Bedouin society, it is often very difficult to judge who commands more respect than whom. Everyone has an equal chance of participating in conversation. No one is accorded special treatment. Most notably, I never saw the opinions or statements of women belittled, mocked or ignored. Similarly, I never felt that I was treated poorly, or that my opinion was less valued as a woman. It is not difficult to understand what Durkheim meant by “mechanical solidarity”. In Arabic, the Bedouin refer to tribal solidarity as *‘asabiyya*, which is well-described in Ibn Khaldun’s writings. There is a powerful bond of trust, kinship, friendship and equality among the Bedouin that is felt in all spheres of daily life.

It is important to remember that there are important cultural differences with respect to how segmentation and kinship are played out in time and space. For example, among the Bedouin of Cyrenaica studied by Emrys Peters (1967), patron-client relations seem to have replaced symmetrical kinship relations among brothers or cousins after World War II. Powerful social groups or coalitions which cross-cut agnatic lineage ties seem to have emerged (Peters 1970: 387). Changes in social relations among tribal communities appear to have coincided with increased state intervention and control (see Gellner 1981: 70). However, as Salzman (1978) point out,

in many tribal societies, segmentation and kinship continue to be central aspects of tribal social organization.

In understanding Bedouin egalitarianism, it is important to understand both the local social economy and the broader political economic nexus of which it is a part. Some anthropologists have argued that egalitarianism among tribes derives from their very lack of power. Davis (1977) writes: “Thwarted in their attempt to gain dominance, men settle for next best- ‘we are all equal’: at least they can resist the assertion of dominance” (p. 99). Gellner (1981) likewise states: “The symmetry and diffusion of power does seem to be a kind of base-line for which the society seems destined by the nature or poverty of its means of coercion” (p. 71). Salzman (1978), on the other hand, has argued that the segmentary model operates even in the face of striking inequalities engendered by state control as an “asserted ideology” (p. 621).

If we reconsider the economic inequality discussed in Chapter 3 in broader perspective, it is possible to develop a more coherent understanding of Bedouin egalitarianism. Chapter 3 in particular reveals poverty in the ownership of land as a general feature of the overall population. Ownership of land is in the hands of nonBedouin peasant landowners. As a result, peasants own the means of production necessary for securing rental of grazing land, agreements for sharecropping and for “hiring in” agricultural wage laborers. The absence of class relations within Bedouin society may in large part be related to the lack of land ownership among the Bedouin.

However, one cannot argue that pastoralists in Bedouin society do not have access to the means of production in the form of livestock. The question thus arises: why do they not “hire in” the labor of Bedouin agropastoral wage workers (i.e., in this

case hired shepherds)?; or why do Bedouin wage laborers *never* “hire out” their labor to Bedouin livestock owners? Oral histories and work history interviews indicate that *hired shepherds* are always *Syrian* Bedouin. That is, there is not one example of a Lebanese Bedouin selling their labor to another *Bedouin* family, whether relative or nonrelative, Lebanese Bedouin or nonLebanese Bedouin. Lebanese

Bedouin *only* sell their labor to *nonBedouin* Arabs. It is considered culturally shameful and dishonorable to work for other Bedouin. Thus, both in the past and today, Lebanese Bedouin in the Bekaa have further maintained social egalitarianism via cultural codes of work and honor and accessibility to Syrian Bedouin labor. Adherence to such cultural beliefs *in practice* has helped deter the spread of potentially exploitative social relations within Bedouin society. It is difficult to imagine that such cultural practices could have developed or been maintained among Lebanese Bedouin if outlets for wage labor activity in peasant society were not available. Thus, the close interaction between Bedouin and peasants in Middle Eastern history has made such cultural practices possible. However, this does not explain the emergence of this cultural practice between Lebanese Bedouin and Syrian Bedouin. To fully understand the cultural ideology of work-honor between Lebanese and Syrian Bedouin, requires knowing more about the historical power relations among Bedouin tribes in the broader region—a question which is beyond the scope of this dissertation. Suffice it to say, however, that cultural practices surrounding work-honor serves as social leveling mechanisms that may have impeded the emergence of exploitative social relations *within* Bedouin society.

Barfield (1990) also points to the importance of political history in shaping social hierarchy (or lack of it) among tribes. In particular, Barfield (1990) argues that egalitarianism is a central historical feature of Middle Eastern tribes. Barfield distinguishes between the Turco-Mongolian tribal systems of Inner Asia (the Iranian and Anatolian plateau zones), and the Arabian tribes of the Middle East (The deserts of North Africa and greater Arabia and the mountain zones throughout the whole region). The Turco-Mongolian or Inner Asian tribes, Barfield argues, have generally been under the control of great empires and hence are more hierarchical in their kinship structure (accepting the authority of hereditary leaders), which in turn laid the foundation for the establishment of large tribal confederacies such as those in Iran.

The Arabian tribes, on the other hand, which include sedentary tribes such as the Berbers, Kurds, and Pashtuns as well as the nomadic tribes of the Bedouin, inhabited a Middle Eastern region generally divided into small regional states¹⁵— a political feature which goes a long way in explaining the egalitarian cultural traditions of tribes indigenous to the Middle East.

Among the Bedouin, recent state military pacification and the rationalization of space have severely reduced the level of political-military autonomy and mobility of tribes. However, historical tribe-state relations in the region did not involve the social and cultural annihilation of tribes. The French did not play-off different tribes against each other (see Chapter 1). In addition, the political vacuum in Lebanon during the Civil War, allowed tribes to maintain significant local socio-cultural autonomy. Today, within and between Bedouin tribal communities, the minimal lineage unit is still

¹⁵ North Africa, Egypt, and Arabia were never united again after the Islamic conquest except for a short period of time as peripheral parts of the Ottoman Empire (Barfield 1990:155).

responsible for blood vengeance/negotiation in the event of a feud due to kidnapping, homicide, and so on. Broader tribal segments are still involved in settling local disputes. Furthermore, tribe is of immense importance for acquiring marriage partners and providing an overall sense of personal identity.

A discussion of the egalitarian structure of Bedouin society would not be complete without an examination of the gender system. In a much praised article entitled: “Is Inequality Universal?”, Salzman (1999) discusses egalitarianism/inegalitarianism among pastoral tribes, challenges the argument that egalitarianism is a myth in pastoral societies. He argues for the need to conceptualize political systems along a continuum of acephalous/hierarchical and to explicitly consider historical variation, particularly how greater state encapsulation of tribes seems to go hand in hand with increased social and political stratification.

Salzman (1999) is able to show how economic inequality is not synonymous with political inequality by reviewing how certain macro/micro socio-political structures and ecological constraints have prevented the emergence of structural inequalities in pastoral systems (see Chapter 6). However, he is strongly criticized for his apologetic omission of considering the role of gender in promoting social and political egalitarianism/inegalitarianism. The last section will thus address how the gender system among the Bedouin of the Bekaa largely reinforces egalitarianism.

Section 4.3: Gender

The most frequent questions I am asked about my experiences in the Middle East concern the status of women: “How are women treated?” ; “What is life for

women like?” or “What are male-female relations like?” ; “Are women forced to veil and stay at home?” and “Do they really circumcise women?”. Underlying such questions are popular stereotypes surrounding Middle East men and women. Dominant images in the media portray Middle Eastern men as aggressive religious extremists and women as passive victims of often violent male fanaticism. While reality is significantly more complex and interesting, an examination of gender roles and relations within Bedouin society reveals a gender complementarity and interdependency between spouses.

The high status of women in Bedouin society is evident from their multiple roles or identities in society. Women are hostesses, mothers, partners in labor, companions of their spouses, marriage negotiators and so on. As hostesses, women exemplify the spirit of Bedouin tribal hospitality and generosity. It is almost always the women who first greet visitors. Regardless of whether they are carrying a five-gallon water jug on their heads, or simultaneously breastfeeding and preparing food for their families, Bedouin women always welcome visitors with enthusiastic greetings. Bedouin culture places great emphasis on the greeting of visitors. Greeting is considered the key to hospitality and friendship and thus involves special verbal expressions and rituals of welcome. Bedouin greeting even retains its special character when welcoming family members and more regular visitors. It is common for women to welcome visitors in their husband's absence.

Women do not take a back seat to male hospitality. Far from it, they are the key cultural custodians of tribal hospitality. Women welcome visitors with proud confidence, kind words, a firm caress for members of the same sex and a charming

smile. While individual men are equally proud, generous and hospitable, they tend to be slightly more reserved in initial social encounters. As women in their greeting and initial conversation set the tone of friendliness, men proceed to make the coffee. If their husbands are not present, male children will prepare the coffee. Women often tell the person preparing the coffee not to heat it up and to replace it with fresh coffee if they deem necessary. The coffee serves to cement the bond of friendliness between host and guest. Cultural rules prohibit women from making coffee.

The first cup is traditionally known as the *heif* cup (the unworthy). This is the host's cup who must first drink a cup of coffee in front of the guest before the guest drinks to assure the guest that the coffee is safe to drink and that it is hot (it is considered insulting to serve cold coffee). The second cup is called the guest's cup or *al-daif* cup. This is the first cup that the guest drinks and by the act of the guest drinking, "bread and salt" friendship ties are established between the host and the guest. The third cup is called the *keif* or entertainment cup. This is the second cup that the guest drinks and it signifies that he feels at home with his hosts and that the hosts in turn have accepted him. The fourth cup is called the *seif* or sword cup. This means that after the guest has been accepted by drinking the guest cup and entertained by the *keif* cup, it now becomes the guest's duty to defend and protect his/her hosts, as it also becomes their duty to defend and protect him/her.

The symbolic meaning of the cups in consolidating the "bread and salt" concept is still of vital importance in Bedouin society. The moral obligation and tribal duty to mutually protect and defend pacts of friendship established through such rituals is strong. Mauss (1990) alludes to the power that resides in objects, specifically the gift

which creates “a mixture of spiritual ties between things that to some degree appertain to the soul, and individuals, and groups that to some extent treat one another as things” (p. 3). The thing, in this case the coffee cup, and the practice, the host-guest acts of serving-drinking, are parts of ritualized activities that reinforce hospitality, friendship and solidarity within society. Every household confers hospitality on their guests and every person is in turn accorded hospitality in the home of another.

In terms of general social decorum, there is no ritualized or institutionalized female obedience of males. In particular, women do not see their husbands as imposing patriarchal or authoritarian figures. They do not take their husbands that seriously. Rather, there is a trust and communicativeness, which seems to mirror the mutual interdependency of their social and economic roles. Bedouin women are not shy to interrupt their husbands, raise their voices at them, contradict them, silence them and tease them mercilessly (both in private or in the presences of family/friends). The most unusual and interesting aspect of Bedouin social life that took me the most time to get used to were gender relations.

It is naïve to assume that for a Westernized female confronting a social order that is gender egalitarian that the initial reaction is a sense of liberation and comfort. In coming from a society that is in comparison, gender inegalitarian, that of the US, I was quite uncomfortable and incredulous for the first month. I did not know what to make of such pervasive female strength and fearlessness.

I remember thinking that I was missing something and that sooner or later the bubble would burst and I would be confronted with the more sinister but “real” face of male patriarchy. I watched in disbelief as women often aggressively silenced their

husbands or ruthlessly mocked their opinions and asserted their own voices. I listened as women teased their husbands with highly inflammatory remarks and watched everyone laugh it off with ease. Indeed, no one ever looked upset and no fighting ever ensued over women's boldness. Women are quite relaxed in the company of men in general and their husbands in particular.

Furthermore, men frequently acknowledge both publicly and privately the value of their wives. Most of all, in interviews and oral histories, men drew attention to *and* complimented the hard work (in childbearing, childrearing and nondomestic labor) *and* companionship of their wives. Men feel no shame or discomfort in voicing or showing their appreciation and affection for their wives.

It is important not to ignore the role of age in determining women's status vis-à-vis men. As women age and become senior members of the community, they are socially recognized for their greater wisdom and counsel. However, it was also clear that women even at younger ages do not lack social confidence. Women begin helping out their families as laborers in their early teens. Their demeanor even at an earlier age is marked by bold maturity and confidence. They participate in social conversations comfortably. And while they heed their mothers and fathers, they are not afraid to challenge parental authority.

The most remarkable examples of women challenging parental authority are nowhere clearer than in marriage negotiations. During oral history interviews, women again and again recounted their dissatisfaction with their parent's choice of marriage partners. Sometimes, women took the matter to tribal sheikhs who often succeeded in convincing parents to reconsider and take heed of their daughters' protests. However,

even in most cases where parents' decision was the final one, the matter was far from resolved. The practice of being forced unwillingly to marry someone is referred to as "ghasb". Bedouin women, do not take *ghasb* lightly. The battle of wills with their parents, suitor and his family does not simply end with the wedding. Indeed, the wedding night itself becomes a focal point of women's proud resistance.

After the wedding and up until the wedding night, Bedouin women will try and escape, taking shelter with other sympathetic family members. Women's attempts at escape are so pervasive that in accordance or parallel to the practice of *ghasb*, there emerged the cultural practice of tying up unwilling brides on their wedding night. In most cases, women are either tied to a chair or to tent posts anchored to the ground in order to prevent their escape. Women were usually tied up with the help of the husband's paternal kin (often her kinsmen as well) who sometimes stood guard outside.

From women's accounts, it seemed to take quite a few men to successfully subdue the reluctant brides. Interestingly, the woman's male siblings are never present. Bedouin tradition forbids the woman's brothers from attending her wedding. What happened afterwards when the couple is left alone varies. Negotiations between the spouses ensued as women either cajoled or threatened their husbands to release them. Sometimes women were successful in negotiating their untying. One woman recalls how she very indelicately threatened her husband as follows:

I am yours and you are mine. I will accept you if you untie me. But, if you do not untie me from this chair, I will leave you. I do not care if I bear twenty children from you, I will leave you and you will suffer a bitter life...

The husband untied her. She then, unbeknown to even her closest kin, forbade him from consummating the marriage for months.

In telling these stories, women were sometimes matter of fact, but more often they were told with laughter and amusement. Most women are able to laugh at the situation because most were content with their lives. In fact, many describe how their married lives did not turn out as sourly as anticipated. Many remarked that their husbands were very kind and respectful of them and were hard-working. The woman described above commented: "My husband never speaks a cross word to me... I go and come as I please and he cares greatly for me."

While many women lament the absence of love marriage, most still emphasize the strong partnership and companionship that developed between them and their spouses after marriage. In short, while the unfolding of events during the wedding and wedding night varies, one thing seems clear: the woman is not to be taken lightly in the marriage. Women are able to draw upon different symbolic and social forms of power, which often surpass description as "weapons of the weak".

Gender egalitarianism is further apparent in the virtual absence of a sexual double standard in Bedouin society. That is, there is a strong moral code of chastity and respect that is imposed on both Bedouin women *and* men. As one couple explained:

We respect the honor of others. We respect the daughters of peasants and our own. We do not let our sons in any way besmirch the honor of peasant girls or Bedouin girls. We do not want or allow anyone to sully the honor of our daughters, so we do not allow our men to behave in ways that smear the honor of other women. We do not tolerate [sexual] promiscuity on the part of our sons.

Masculinity or maleness in Bedouin society, unlike the more patriarchal peasant society, is not defined by sexual exploits pre-marital or extra-marital. Premarital sexual relations are strongly prohibited for both sexes. Extramarital affairs are also socially frowned upon and seem to be quite infrequent. Bedouin women are disarmingly candid about their relationships with their husbands. In my sample, only three women indicated that their husbands were unfaithful. Bedouin women have strong expectations of sexual fidelity from their husbands.

In terms of female fidelity or infidelity, strong cultural codes of female honor and chastity discourage sexual indiscretion on the part of women. Furthermore, women have less opportunity for extramarital affairs. While Bedouin women traditionally decorated camels and rode on them, they do not drive trucks or cars. Men thus have greater opportunities to engage in affairs since they have greater mobility afforded by trucks.

While women visit neighboring family members alone, they seldom have the privacy or anonymity in their home or village needed for having a discrete affair. The only potential partners for women are their husband's kinsmen who live close by and visit routinely without any social or moral impropriety. However, such scenarios are highly unlikely since most married men and women spend a good deal of time together, have strong sense of honor and have a constant stream of visitors into and out of their homes which preclude such private encounters.

Gender egalitarianism can also be seen in cultural forms of dress. While most of the literature on Middle Eastern peoples emphasizes veiling as a central component of female seclusion and honor, less attention is given to male forms of dress. Among the

Bedouin, men too are veiled. While cultural forms of dress mark gender distinctions, modesty is seen in both male and female clothing (see Figure 4.1 and Figure 4.3 for pictures of Bedouin male and female forms of dress, respectively). Clothing is viewed as a form of protection and signifies cultural-religious rules of modesty. Such modesty is reflected in the covering of most of the body except for the hands and face.

Changes in Gender Relations

The discernable changes in gender relations seem to have accompanied villagization. Most Bedouin villages are relatively young, normally between ten to 25 years. However, there is one village, which is over 50 years old, and some important differences in gender relations are discernable. In this village, even older women have abandoned their traditional Bedouin dress. Younger women wear short sleeves and jeans, highly unusual for the Bedouin. The village has a mosque and a few shops, but no paved roads. While it may seem ironic to some that gender relations are more inegalitarian in more “modern” peasantized villages, this seems to be the case in the village of Taysir.

There are little discernable differences between women who assist their husbands and contribute to the household exchequer and those who do not. In other words, the overall social environment of gender relations is much more oppressive. Male surveillance of females tends to be greater, female mobility is significantly reduced and women tend to be more mindful of their husbands. Thus, it appears that greater participation in wider peasant Arab culture, which have accompanied villagization and sedentarization have had important impacts on gender system of more villagized Bedouin.

In attempting to understand the change in women's status, it is important to understand the "mode of spacetime" as Munn (1986) would call it or the "mode of information" as Poster (1990) would call it. Basically, there is a profound change in the social and symbolic construction of space-time. Spatio-temporal practices have seen dramatic change in Bedouin life. First, sedentary dwellings and increasing village size have altered the cultural meaning of the spatial landscape.

Bedouin tents are traditionally left open as a sign of welcome to visitors and women's movements around the tent site and camping unit are rarely problematized. Daily life is mostly spent in close company of close kin or members of one's lineage. There are no cultural restrictions on women working or socializing with other close agnatic or affinal kin or side by side with their husbands. However, with increasing sedentarization and population growth in the older village of Taysir, the situation has changed. Social activities increasingly involve interaction with other lineages and different tribes within a village.

Men and women thus find themselves in a different moral and spatial universe. Moreover, because the village in question is also located on a major road to peasant towns and villages, even walking down the street to visit a relative involves contact with peasant drivers on the road. Thus, as Bedouin villages grow in size to include various neighborhoods, which in turn house several distinct families, there is a change in gender relations. One's neighbors are not necessarily one's close relatives and the village is no longer a family residential camping unit. Cultural honor requires distinct rules of conduct with distant relatives or non-relatives. Female dishonourment is less worrisome among

close kin. Cultural rules of modesty, however, become difficult to sustain in this new spatial context and so redefinition of women's movements are discernable.

A second reason for the decline in female status is the change in religious organization and practice. While the Bedouin in their nomadic movements may have only prayed intermittently in their homes, with sedentarization, prayer has become institutionalized. Peasant women normally do not attend daily or Friday prayer at the mosque.

In the Bekaa today, if a mosque is large enough to accommodate large numbers of worshipers, women are allowed to pray in a smaller space usually on a second story. Women do not pray side by side with men. In addition, a large partition is placed in front of the women, so that they are neither visible to the men or the religious sheikh delivering the sermon. Thus, Bedouin women, like their peasant counterparts, are prevented from full social participation in an important religious activity.

In short, as the Bedouin's social-spatial order changed from camping units to villages, and as Bedouin become more dependent on peasant life, female honor has been redefined, emphasizing greater seclusion of women. Also, due to the separation of the moral spheres of men and women, the social participation of women in daily religious activities is prevented. Within this new moral and social-spatial configuration, there is what may be termed cultural domination occurring at a local scale, with peasant definitions of space-time replacing those of the Bedouin.

The other more subtle change in cultural gender relations that is beginning to emerge is changing cultural perceptions of women's productive work. The majority of the Bedouin women note that their productive work in society stands in contrast to the

role of nonBedouin Arab women. As one woman said, “We are partners with men in labor. Fellahin [plural of Fellah] do not help their men in work as we do. This is how we live.” However, there are discussions among some sheikhly families that highlight the superior status of peasant women.

The daughter of a well-reputed sheikh stated: “The Bedouin work their women too hard. Peasant men respect their women more. Peasant women have it better. They sit around and drink coffee and entertain their guests all day.” While such comments were quite rare, discussions over the proper role of female child labor are more common. That is, while the work of married women is only rarely problematized, female child labor is being renegotiated and increasingly reexamined. Many couples, particularly in sheikhly families, expressed reservations about hiring out female child labor. As the wife of another well-known sheikh explained:

A lot of individuals in our *ashira* (tribe) are no longer allowing their daughters to work. We have traditionally allowed our daughters to work in groups alongside other daughters of close relatives. But this is changing. We now see it as ‘*ayb*’ (shameful/dishonorable). I will not let my daughters work.

Some Bedouin families are thus beginning to redefine the role of female child labor according to elitist peasant definitions of female work-honor and propriety. While these were still discussions among a minority of families, it is likely that the practice of hiring out of female child labor is changing among some tribes. Such a change might pave the way toward future lines of difference between tribes or forms of production. It remains a question for future research to determine whether gender becomes a source of moral difference within Bedouin society, which sets groups apart.

Conclusions

Segmentation with its fluid leadership, equality and individualism pervades Bedouin social structure. The cultural marriage and kinship system emphasizes lineage endogamy and the primacy of agnatic ties, while the gender system reinforces interdependency and complementarity between men and women in social and productive roles. The egalitarian gender ethos among the Bedouin reinforces the overall egalitarianism of Bedouin social life. However, to what extent changes in the culturally-defined roles of female adults and children, which have accompanied villagization or greater Bedouin participation in Arab peasant society, lead to gender inequality and moral cleavages between tribal or productive groups remains a question for future research.

PART II: DEMOGRAPHIC REGIMES AS PRODUCTION SYSTEMS?

CHAPTER 5: THE DEMOGRAPHIC REGIME OF THE TOTAL POPULATION AND OF FORMS AND MODES OF PRODUCTION

The primary aim of this chapter is to characterize the demographic regime of the overall Bedouin population and determine whether or not different forms of production within Bedouin society have their own demographic regimes. Demographic data presented here were collected during interviews with wives and their husbands (if present at the time of the survey). Full reproductive histories were obtained from women on numbers of pregnancies, proportions of pregnancies that ended in miscarriage or stillbirth, and number of livebirths. Infant and child mortality data were also obtained from maternal histories and are presented in Section 5.2 on Mortality. Fertility will be examined first, followed by mortality, while the final section, Section 5.3, addresses the question of whether different forms of production have their own demographic regimes.

Section 5.1: Fertility

In order to characterize the overall level of natural fertility, the total fertility rate is used as it provides an easy to interpret measure of reproductive performance. The *total fertility rate* (TFR), defined as the expected number of offspring ever born to a randomly selected woman who survives to the end of the reproductive span (i.e., to menopause or to some suitably advanced age), given that current age specific fertility rates remain constant (Campbell and Wood 1988: 40). The total fertility rate has two major advantages as an aggregate measure of fertility 1) it is a pure fertility measure, uninfluenced by the

age and sex composition of the population or by mortality, and 2) it is one of the very few aggregate measure of fertility that is interpretable in terms of an individual woman's expected reproductive performance (ibid.). The TFR can be calculated as a cross-sectional (period) measure simply by summing the population's current age specific fertility rates. However, it can also be computed as the mean number of live born offspring ever born to women of postreproductive age, in which case the TFR is a retrospective measure of cohort fertility. Wood (1988) cautions however that if mortality is selective with respect to fertility, that is, if reproduction itself exposes the mother to an elevated risk of death, then retrospective TFRs may be biased downward, simply because women of low fertility have a better chance of surviving long enough to be in the sample (p. 40).

It is also important to remember that period and cohort TFRs are expected to be the same only when fertility rates are not changing over time (ibid.). Period age-specific fertility rates and TFR among the Bedouin are shown in Table 5.1. Cohort fertility rates among 42 women aged 45 and over are shown in Table 5.2. Clearly, period TFR (5.5) and cohort TFR (8.8) are not the same among the Bedouin, which is an indication of recent demographic change. To what extent this pattern is "permanent" and indicative of fertility decline requires future cohort estimates of TFR of younger women as they complete their reproductive careers. It is problematic to use period estimates from one point in time to discuss historical fertility change. The fertility transition is a historical process and requires data on fertility at different points in time preferably including cohort estimates of fertility.

Our clearest window into fertility is obtained from women aged 45 years and older. These women provide the only information on questions that require looking at completed reproductive performance, such as age at menopause, and they provide valuable sources of information on the context of changes in fertility performance during the recent decades of social change affecting the Bedouin. Table 5.2 shows the age specific fertility rates and parity (children ever born) for women who have completed their reproductive lives. The 42 women who were 45 years and older in 2000 reported having given birth to 370 children born alive (excluding miscarriages and stillbirths), an average of 8.81 a piece. The women had between zero and eighteen live births apiece over the course of their lives. In the third column from the right, Table 5.2 shows the total number of births to women in the age classes 15-19, 20-24, 25-29, and so on. Only one women reported zero parity which indicates around 1.5 % of married post-reproductive Bedouin women are nulliparous. This is not an unexpected observation for two reasons. First, the reproductive system is sufficiently complex and has a certain probability of failure.

The second reason this observation is not unusual is because empirical findings in other noncontracepting populations indicate that some 3-10% of married post-reproductive women have zero children (Howell 2000: 125). Thus, primary sterility among the Bedouin is either low or low due to sampling error. Sampling error seems unlikely since after completing interviews in each of the villages, I asked older women if they knew any post-reproductive women who were nulliparous. Only one woman was identified in all of the villages sampled. However, I was unable to locate the woman in

question (who was visiting her married son in Syria). Nevertheless, at most, the primary sterility estimate is only a slight underestimate.

Because the sample of 42 post-reproductive women is somewhat small, it is useful to look at mean parity of a larger sample of women aged 40 years and over who either have completed or are near to completing their reproductive careers. To verify mean parity and TFR of 8.81 ± 3.31 for women aged 45 years and over, we may enlarge the sample of live births by including sample women aged 40 years and over in our calculations. The majority of these women have completed or are near completing their reproductive careers.

Data on 65 women aged 40 and over reveals similar number of mean children ever born ($\mu = 8.88 \pm 3.14$ see Table 5.3). Table 5.3 shows the mean parity of 65 Bedouin women aged 40 and over to be 8.9. The modal fertility is 10 in Table 5.3. However the fact that the mean parity is slightly higher instead of lower when including younger women needs to be explained further. To do this, we must divide women into age cohorts. Table 5.4 shows mean parity by age cohort. Women in the age cohort 45-49 experienced a reduction in mean fertility of one birth. This is not unusual if you consider that the mean age at marriage for women of that cohort (see Table 5.5 for the mean and median age at marriage for women of different age groups) is 18 and therefore these women were marrying around the late 1960s and early 1970s, right around the period of greatest political and economic insecurity in Lebanese history (1966-1975)¹⁶, only second to the Israeli invasion of 1982.

¹⁶ Between this period, was the Arab-Israeli war of 67, the collapse of the Lebanese INTRA Bank in Lebanon (its major branch in Beirut but with other branches in major Arab cities and in financial centers of Europe and America) in 1966, and most importantly the two years war of 1975-1976. The two years war actually started in 1973 and involved many confessional massacres against civilian Lebanese and

Women in the age cohort 40-44 who were marrying on average between 1974-1978 had a higher mean parity of 9, which is closer to the mean parity of women in the 50-54 age group. Differences in mean number of children ever born among birth cohorts are not statistically significant ($p > .05$). Thus, the TFR of 8.8 provides a good indicator of the reproductive performance of Bedouin women born between 1946-55. In comparison, to other natural fertility populations, the TFR among the Bedouin is very high.

However, before comparing Bedouin fertility to other natural fertility populations, it is important to briefly consider whether there are any differences within the population in terms of the use of contraceptive techniques or other changes in behavior following the attainment of a certain number of children. We can do this by distinguishing between natural and controlled fertility populations and examining the use and effectiveness of contraception (in this case traditional) within Bedouin society.

Roughly forty years ago Louis Henry (1961), in a paper entitled 'Some data on natural fertility' published in the *Eugenics Quarterly*, refined the definition of 'natural fertility' as a concept in demography. Anthropological demographers have used the term subsequently to refer to the absence of deliberate, parity specific changes in reproductive behavior intended to limit reproductive output in order to meet some preconceived target family size (for critical discussions see Knodel 1983, 1988). Henry's (1961) examination of natural fertility populations led him to discern a striking pattern.

Specifically, he observed that although the level of marital fertility varies between groups, the age pattern of natural fertility is relatively invariant. The intellectual strength of this concept derives from the statistical evidence which its operationalization provides

Palestinian people in many regions, resulting in damage to commercial, financial and industrial Lebanese economic activities. Syrian troops entered the capital and put an end to the Civil War in 1976 and the Arab

for the consideration of the age patterns of fertility that are not subject to parity dependent controls.

Thus, if as in Figure 5.1 we plot age-specific marital fertility rates from some well-known natural fertility populations, we find that while overall fertility levels vary greatly, the shape of the curves are very similar. All of the populations in Figure 5.1 are convex in shape. Natural fertility populations display a convex shape, while controlled fertility populations display a shape that is concave. The similarity of the curves is especially evident if indexing is used, that is if fertility rates at each age are adjusted to age-specific fertility rates in the 20-24 age group.

Figure 5.2 depicts adjusted age-specific marital fertility rates. When age-specific marital fertility rates are adjusted, the age patterns of fertility are strikingly similar, although levels vary considerably. There is, however, one unusual feature of the fertility curve for the Bedouin. The peak period of fertility occurs after the age of 25, a feature that has only been found in New Guinea (Wood 1990) and Nepal (Folmar 1992).

If we compare plots of Bedouin period and cohort age-specific fertility rates (see Figure 5.3), we see that the shape of both curves is convex, although the levels are clearly different. This indicates fertility decline among younger Bedouin women.

The convex shape of the curve is also apparent if we examine parity progression ratios (Figure 5.4). Parity progression ratios are calculated from reports on parity, the number of children ever born to women past reproductive age. The ratios take advantage of the time-dependent nature of parity: The first ratio shows the proportion of all women who ever had a first live birth, whether or not they went on to have additional births. The

Peace Plan 1976-1982 returned a measure of economic and political security to daily life.

second ratio shows-for the women who had at least one child- what proportion progressed to having two or more, and so on.

Bedouin women who were 45-years old and over in 2000, for instance, had parity progression ratios between .98 and .68 from the first progression (from zero to one child) to the eighth (from seven to eight children). This means that about nine-tenths of the women who have had a child, have had another later and that slightly over two-thirds of women who had a seventh child went on to have an eighth child. Very high fertility populations may have parity progression ratios that are very nearly constant over a wide range of parities; that is, roughly the same proportion of women cease further childbearing after each birth. Furthermore, in natural fertility populations, there is a slower decline at higher parities. The Bedouin pattern in parity progression ratios is a primary decline after the seventh child and a secondary decline at the eleventh child. Again, the convex shape of the curve is apparent.

Is the absence of parity-specific control, which is inferred statistically or graphically, also confirmed by the contraceptive behavior of women? Roughly forty percent of 42 women (or 17 women) ages 45 years old and over indicated that they at some point in their reproductive lives used traditional contraception, namely withdrawal. None of the women of post-reproductive age reported using modern contraceptives. Nonetheless, there are no statistically significant differences in the mean completed family sizes among women who used withdrawal versus those who did not ($p > .05$).

Likewise, in the total sample of 240 women, traditional contraceptive use was not a significant predictor of variation in the mean number of live births ($p > .05$). In terms of ethnographic data, Bedouin women confirmed using withdrawal for the purpose of

spacing not stopping births. Thus, different data sources indicate that there is an absence of parity-specific stopping behavior among the Bedouin. The concept of natural fertility or absence of conscious parity-specific stopping behavior does not preclude conscious spacing.

While it is clear that the Bedouin can be described as a natural fertility population, how does their fertility compare to that of other societies? Table 5.6 compares the Bedouin with other natural fertility populations that span the observed range of variation in total fertility rates. The four natural fertility populations are taken from Wood (1988), who selected them due to the detailed information available on their reproductive patterns. The populations are presented in increasing order of TFR and compared according to their proximate determinants. Again, the proximate determinants framework proposes that because biological reproduction is a regular process, it is possible to come up with a short list of variables that have a direct and inevitable effect on fertility-inevitable in the sense that any change in one of these variables translates immediately into a change in fertility. These variables are known as the proximate determinants of fertility (see Table 5.7 for a list of the proximate determinants emphasizing physiological determinants).

If any factor is to affect fertility, it must do so via its effect (either direct or indirect) on one or more of the proximate determinants. The utility of the proximate approach is said to lie in the fact that in trying to account for fertility variation one could list (in a statistical fashion) every single factor potentially affecting reproduction, such as religious affiliation, wife's educational background, household wealth, coital frequency

and a host of physiological variables ranging from maternal nutritional status, to the frequency of ovulation or the viability of sperm.

However, this list would tell us little about which of these variables is likely to be most important in explaining fertility variation. Such effects on fertility can be direct (i.e., operating directly through the proximate determinants) e.g., when marriage patterns change and directly affect the timing of marriage and the onset of sexual relations. They can also be indirect i.e., as cultural belief systems change, they in turn influence the proximate determinants. For example, cultural beliefs that call for long periods of sexual abstinence among couples immediately following marriage or the birth of a child may be altered by religious proscriptions which require shorter durations of post-partum sexual abstinence, resulting in a change in fertility. James Wood (1990) describes the utility of this framework:

We focus on the proximate determinants merely as a necessary first step toward assessing the effects of more remote influences, which are often the effects of greatest ultimate interest. Indeed, the proximate determinants approach can be thought of as an accounting frame within which to specify the precise *mechanisms* [italics mine] whereby remote influences act upon the reproductive process (1990:220).

Thus, proximate determinants framework help us understand the mechanisms of reproduction and point to the influence of broader processes.

The proximate determinants of five natural fertility populations, including the Bedouin are depicted in Table 5.6. If we take the first group in Table 5.6, the Ganj, and examine the proximate mechanisms column by column, we see that low fertility among the Ganj is achieved in large part through both late menarche, late age at marriage and

exceptionally long interbirth intervals associated with prolonged lactational infecundability. Among the !Kung, we find a similarly low level of fertility achieved through both long interbirth intervals (which largely reflect the prolonged and frequent breast feeding which characterizes this group) and a high primary sterility rate, largely due to widespread gonorrhea (Pennington 1992). If we look at the Bedouin, it is interesting how similar their proximate determinants are to the Hutterites. The Hutterites attain their exceptionally high fertility through shortened birth intervals associated with early weaning.

While the Bedouin marry several years earlier than the Hutterites, they too have relatively short median birth intervals (25 months) due to early weaning. Because breastfeeding practices have changed among younger women, breastfeeding data examined here only include women 35 years and older. Current status data are of highly dubious reliability since only nine women were breastfeeding at the time of the reproductive survey. According to current status data on breastfeeding, approximately 50% of children are weaned by 13 months of age. In terms of cessation of breastfeeding, 100% of children are fully weaned at 19 months of age.

Retrospective data on breastfeeding derived from sample women 35 years and older indicate a significantly higher median age at breastfeeding of 18 months. Among these women, roughly 40% of infants receive supplemental foods by the age of five months. The median age at which these women begin introducing supplemental foods is seven months. In terms of retrospective estimates of return to menses, 50% of women report postpartum menses at eight months.

Because sampling error is a factor in current status estimates on weaning and error introduced by maternal recall is a factor in retrospective estimates of weaning, the best that can be said is that the cessation of breastfeeding among Bedouin women occurs on average between 13 and 18 months. If we take the average of these parameters, 15.5, to be a somewhat plausible estimate of the average age of weaning among older Bedouin women, we can obtain indirect estimates of the mean duration of postpartum menses. As it turns out, retrospective estimates of the median age at which women resume menses (eight months) corresponds well to indirect estimates for the mean duration of postpartum amenorrhea calculated at 9.95 (Corsini 1979) or 9.64 (Bongaarts and Potter 1983)¹⁷.

In addition to early cessation of breastfeeding, early and stable marriages also contribute to high Bedouin fertility. Marital stability among the Bedouin is high and divorce and widowhood are rare, with most women remaining in their first marriage. Out of 240 ever-married Bedouin women, four were divorced and four were widowed in the sample. This indicates low rates of marital dissolution (3.3%). Three out of four of the divorcees remarried within less than five years. The widows in my sample did not remarry as most experienced widowhood late in their marital lives. Among 42 post-reproductive women, one woman was divorced and remarried within less than five years, and two women were widowed after 40. Such low levels of marital disruption among the Bedouin help contribute to their very high fertility (see Figure 5.1 for total marital

¹⁷ Corsini (1979) calculates the average length of postpartum amenorrhoea by the linear regression equation:

$$y = 1.332 + 0.556x$$

where x is the average duration of breastfeeding and y is the average duration of postpartum amenorrhoea. Bongaarts and Potter (1983: 25), in examining the relationship between breastfeeding duration (x) and postpartum amenorrhoea (y), found that the curve which best fit the relationship was the following

exponential: $y = 1.753e^{0.139x - 0.001872x^2}$.

fertility rates among 42 post-reproductive women adjusted by the proportion married (or those single, divorced and widowed) in each age group).

In short, the Bedouin are able to achieve high fertility through a combination of early weaning, early and stable marriages, and low incidence of primary sterility. The next section examines the mortality experience of Bedouin remains to be explored.

Section 5.2: Intra-uterine, Infant and Child Mortality

This section seeks to understand the mortality conditions of the Bedouin. Intra-uterine mortality will be discussed first followed by infant and child mortality. Infant and child mortality rates will then be compared cross-culturally to help explain some of the variation in mortality rates.

Intra-uterine Mortality

Results from Table 5.8 show that the Bedouin have comparable rates of intra-uterine mortality to other data sources described by Bongaarts (1983). Intra-uterine mortality rates for developing countries are reported to be within the range of 12-15% (Bongaarts 1983: 123). Despite diligent efforts made in the field to complete maternal histories, some miscarriages and stillbirths are often omitted, especially for older women. In many areas, it is likely that there will also be an incomplete reporting of early miscarriages due to spontaneous abortions being mistaken for menstruation during the early stages of pregnancy. However, because of the high value placed on children in Bedouin society, women easily recounted the number of pregnancies that resulted in miscarriage or stillbirth. An intra-uterine mortality of 15.2% is at the upper end of the

normal range for other developing countries. This is most likely due to the older age of women for whom this estimate was derived.

Infant and Child Mortality

Proportions of children ever born who are currently deceased by current age of the mother are shown in Table 5.9. For all women between 40 and 44, five percent of offspring born alive are now dead. For women between 45 and 54 years approximately nine percent of all offspring born alive are now deceased. The majority of deaths of offspring to women currently aged over 40 years will have occurred many years beforehand since mortality risks to children are highest before the age of five years. Thus, by comparing mortality risks of children to women between the ages of 50-54 and 45-49 with women between the ages of 40-44 and 39-40, we find that in the past Bedouin children seemed to have slightly lower survival chances which then improved (.05 percent for women aged 40-44) and were reduced again (.09 percent for women aged 35-39).

However, the best source of data available for analysis of mortality comes from examining the number of children ever born to the 240 ever-married women interviewed about their reproductive histories in 2000. These women range in age from 15-54, with one woman 56 years of age. The women reported on the birth of 1,399 children born to them by the end of 2000. The ages at death of deceased children (as opposed to the year of birth) are guesses rather than estimates arrived at in a systematic way. Following Howell (2000: 81), mothers were asked for each deceased child about developmental markers reached by that child before death (i.e., teething, sitting up, walking, weaned,

sexually mature and so on), whether the birth of other siblings had already occurred at the time of the child's death, and to identify a living child who is roughly the same age now as the child was at death.

Table 5.10 shows the calculation of the mortality rates from the raw data. The partial life table based on these deaths consists of an application of the q_x measures to an artificial cohort of 100,000, showing the number of deaths that would be produced for each age group in the artificial population. Since the data run out before we reach the highest age to which anyone can survive, we cannot calculate the L_x , T_x , and e^0_x columns of the life table. Table 5.10 reveals low mortality among the Bedouin. The infant mortality rate among the Bedouin is 53 per 1,000 and the child mortality rate is 16 per 1,000. . Lifetable estimates, in Table 5.10, indicate that the overall rate of mortality for children dying before their fifth birthdays (5^q_0) among the Bedouin is 73 per 1000 livebirths. In other words, 7.3%, roughly one in 13 of all children, die before reaching the age of five.

The infant mortality rate¹⁸ is considered a good indicator of the health status of a given area. One of the world's lowest infant mortality rates, 4 per 1,000, was found in Japan in the mid 1990s. A high rate would be Afghanistan's 163 per 1,000. Bedouin infant and child mortality rates are low in comparison to the mortality experiences of other nonWestern natural fertility populations.

Table 5.11 lists the infant and child mortality rates for 13 nonWestern groups. Rates during different periods or locations for seven of the groups are also included for comparison. An important feature of the data is that infant mortality varies greatly among

¹⁸ Infant mortality rates fluctuate yearly. I calculated the infant mortality rate among the Bedouin over the past year and the result was 72 deaths per 1,000, which is higher than the estimate in Table 5.10.

these groups, and that early childhood rates vary even more drastically. Infant mortality ranges from a low of .05 among the Bedouin and .06 among recently born Herero of Botswana to a high of .24 among an ethnically mixed population of Mandinka and Jola in the Gambia. The lowest early childhood mortality rates, .02, are found among the Bedouin and among the most recently born cohort of Herero children, .03. The highest childhood mortality rates are found among Delta Fulani in Mali, where .36 of children reaching the age of one die before they turn five.

The mortality of children also varies widely within each ethnic group. Pennington (1996) argues that the decline in early mortality among !Kung children is due to changes which accompanied sedentism, namely increased caloric intakes as a result of greater access to domesticated animal milk from Herero cattleposts (p. 263). In fact, Pennington (1996) proposes that access to cow's or other milk as well as other high protein weaning foods helps to explain much of the variation in child mortality rates in the table (ibid.). Indeed, the Bedouin, have the lowest infant and child mortality rates in Table 5.11. Bedouin children also have access to both sheep/goat milk and cow milk in the region. Also important in understanding low mortality among the Bedouin is the presence of local clinics in the Bekaa with very well-trained midwives. Most Bedouin women have their children in local clinics with the help of a *daya* (midwife). However, some of the older women gave birth at home with the assistance of their mothers or older Bedouin women with previous childbirth delivery experience.

The mortality and fertility experiences of the Bedouin are similar to those of the Hutterites. Both the Bedouin and Hutterites have what may be called modern mortality experiences. During the period from 1946 to 1950 the average infant mortality rate

among the Hutterites was 45 per 1,000 (Eaton and Mayer 1953: 240), slightly lower than that found among the Bedouin. The Hutterites also had skilled midwives and high quality health care facilities (Eaton and Mayer 1953: 241-2). The presence of high quality medical and health care facilities in both settings may help to explain the very high achieved fertility of both groups.

The discussion, thus far, has focused on the reproductive and mortality experiences of the Bedouin population and demographic comparisons with other nonWestern groups. With a demographic, cultural and political economic understanding of Bedouin life in hand, we will now turn to the question of whether or not different forms of production have their own demographic regimes.

Section 5.3: Forms of Production and their Demographic Regimes

While in Chapter 3 we saw that differences in wealth exist between different forms of production, it is unclear whether fertility and mortality are responsive to forms of production. Table 5.12 shows the mean children ever born for sample women by form of production. While it may seem that differences in mean children ever born are different for each mode of production, with shepherds having the highest fertility and wage laborers the lowest, these differences are in large part due to differences in age between the different occupational groups. Table 5.13 shows the mean age of women for each group.

Shepherds are the oldest at 37, with wage laborers on average seven years younger in age. This difference may indicate one of two things. Either shepherding as a way of making a living is slowly dying and thus largely characterizes older individuals or

that as Bedouin families involved in wage work age, they will acquire the means to purchase livestock and become herders. While mobility of couples across forms of production is not uncommon, there is evidence that shepherding as a way of life is on its way out. Many families have already sold their flocks to buy land and/or build a house over the last few decades, and a large number of families who reside in villages or neighborhoods adjacent to non-Bedouin Lebanese peasants, indicated that they would probably sell their flocks in the near future since many were receiving repeated complaints by villagers and local governors about their flocks harming crops.

Bedouin livestock owners also complained about the increased difficulties they had in reaching agreements with Lebanese landowning families to graze their flocks on the stubble of the harvest fields. Bedouin pay farmers per dunum and by harvest crop to graze; however many peasants refuse to let the Bedouin graze their flocks even for a sizable monetary sum. So, while mobility across modes of production is not uncommon, it does appear that shepherding as a way of life is increasingly becoming a less and less viable for many Bedouin families.

A General Poisson loglinear model was used to determine whether different forms of production have their own fertility regimes. The analysis controlled for marriage duration (since marriage duration includes both age and age marriage and once marriage duration was controlled for neither age nor age at marriage had independent effects on the mean number of live births). Table 5.14 shows the results of the model. While marriage duration is obviously significant, form of production is not ($p > .05$). Thus, we cannot reject the null hypothesis of no relationship between forms of production and fertility regimes.

A General Poisson loglinear model (controlling for marriage duration) was also used to determine whether different forms of production have their own mortality regimes. However, the model reveals no statistically significant relationship between form of production and child survivorship ($\chi^2_{LR} = .04; p > .05$). Given that mortality rates are relatively low among the Bedouin, perhaps it is not surprising that there are no significant mortality differences between forms of production. However, while there may be little in the way of infant and child deaths to study, the same cannot be said for fertility. The lack of variation in fertility within the Bedouin population according to form of production requires further examination.

Conclusions

Short birth spacing (due to early weaning), early and stable marriages, and low prevalence of primary sterility have enabled the Bedouin to achieve a high fertility rate close to the highest level of achieved fertility known, that of the Hutterites. In terms of mortality, the Bedouin have relatively low rates of infant and child mortality in comparison to other traditional societies due in large part to the availability of high quality weaning foods (i.e., sheep and goat milk) and safe birthing and maternal care practices. There are no significant intrapopulation or intrasocietal differences in fertility and mortality among forms of production. The next chapter explores the question of why intrasocietal forms of production do not have their own fertility regimes.

CHAPTER 6: WHY DON'T DIFFERENT FORMS OF PRODUCTION HAVE THEIR OWN DEMOGRAPHIC REGIMES?

This chapter hopes to address the question as to why there is no relationship between demographic regimes and productive systems within Bedouin society. Basically, I argue that societies with egalitarian sociopolitical structures and cultural ideologies tend to be less internally differentiated in their fertility and mortality behavior. In such contexts, intrasocietal fertility differences may be more biological than sociocultural. As mentioned in Chapter 3 there are no recognizable classes within Bedouin society, only different forms of production. Societies that are egalitarian or more specifically societies in which class or caste stratification are absent are likely to have a relatively egalitarian demographic structure. Demographic research in European societies (see Chapter 1) indicates class differentiation in the fertility and mortality behavior of local village communities. There is evidence of fertility decline among the Bedouin, but yet there are no significant differences in fertility by form of production, suggesting that local production systems have no influence on micro-reproductive behavior.

In order further ascertain the relationship between social economy and fertility, Section 6.1 examines the relationship between economic wealth differences and fertility. If wealth differences in ownership of the means of production shape fertility, then it is plausible to argue that there is some relationship between economy and fertility in Bedouin society. Section 6.2 draws on ethnographic data to understand the meaning of

children in Bedouin society and determine whether or not children are viewed as economic assets. Section 6.3 examines the fertility distributions of the Bedouin population and other natural fertility populations in order to determine whether the demographic structure displays the equality found in the socio-political structure. The last section, Section 6.4 examines the interrelationship between class and demography at different scales, suggesting that the interrelationship is not uniform in time and space.

Section 6.1: The Relationship between Wealth and Fertility

While we can be sure that fertility is not responsive to local forms of production, we have not examined whether economic wealth differentials (in terms of ownership of the means of production) by themselves influence fertility. This question is reminiscent of the Caldwell's thesis that in pre-transitional societies where wealth flows from children to parents, fertility will be high and unrestricted. In contrast, transitional societies are said to have experienced a change in wealth flows so that large families are now perceived as costly and hence parents begin to limit their fertility. Thus, the Caldwell's conceptual model predicts that in pre-transitional societies, *wealth does not determine fertility but visa versa*.

We already know from historical demographic research in European societies that class differences in fertility seem to increase in tandem with the process of fertility decline. The Caldwell's thesis needs to be revised somewhat to account for the European experience just prior to transition in which children follow wealth and more specifically social class. We know that just prior to transition, aristocratic gentry landowners had higher fertility than landless and land-poor peasants—a situation which was reversed

after transition (see Schneider and Schneider 1996; Kertzer and Hogan 1989: 167). The relationship between wealth and fertility in nonWestern pre-transitional and transitional societies is less clear. Ofcourse, even if a relationship were established between wealth and fertility in nonEuropean societies, this does little to determine the causal direction of the relationship. In other words, do wealthier families have more children or do those with more children have more wealth?

In order to address these problems, White and Burton (1988) and White (1989) suggest that researchers can examine the age pattern of the relationship between wealth and childbearing. In order to establish that children lead to wealth, one must demonstrate that wealth is associated with older age cohorts who have higher parities. In other words, if there is a correlation between wealth and fertility at later ages only, one can say that children lead to wealth. However, if a correlation is established between wealth and fertility among both younger *and* older age cohorts, this indicates that wealth leads to fertility.

A Poisson loglinear regression model was used to examine the Bedouin data. The model controls for age at marriage and family type (i.e., nuclear and complex), which may confound the association between wealth and fertility at each age grouping. Table 6.1 shows the statistical association between wealth and fertility by age cohorts (five-year age groups) of women. The claim that the level of fertility and wealth are related among women for younger age groups is rejected since the chi-square statistics associated with the variables in earlier age cohorts are not statistically significant.

However, there is a statistical association between fertility and wealth among women in the 30-34, 35-39 and 40-44 age cohorts (see Table 6.1). While it is plausible to

Table 6.1: Summary of Statistical Association Between Wealth and Parity By Age Cohort (Controls: Family Type and Marriage Duration), Poisson Loglinear Regression

AGE COHORT	N	χ^2_{LR}	<i>p</i>
15-19	10	1.87	.1714
20-24	32	1.60	.2060
25-29	43	2.23	.1352
30-34	53	7.85	.0051
35-39	37	11.71	.0006
40-44	23	12.81	.0003
45-49	26	0.19	.6614
50-54	16	.	.
Sample Total	240	6.13	.0133

argue that among the Bedouin, wealth does not lead to fertility but rather wealth follows fertility, this is still somewhat incomplete. If we examine Table 6.1 carefully, we see that wealth seems to follow the life cycle of the family.

There are two possible explanations for this pattern. The first explanation relates to the productive role of children. During the early stages of family building, when children are still largely consumers, children are not contributing to family wealth, hence children do not lead to wealth. However, as children reach productive age, the wealth of the family increases. The lack of association found among the oldest women in the sample, may indicate that as children are married off and as fissioning of the household occurs, wealth declines in tandem with changes in the family life cycle. While this explanation may sound convincing, it is not supported by the data. That is, there is no significant relationship between the number of child workers (children 14 and over) in the family and household wealth at any age ($p > .05$).

A second possible explanation is provided by Chayanov's discussion of peasant economies. Chayanov (1966) argued that in order to understand household production, one must not only take into account the number of household producers (workers) or the number of household consumers, but the household ratio of consumers to producers. Specifically, Chayanov argued that as households go through different stages of their developmental cycle, their demographic composition changes, which, in turn, changes households levels of production (Durrenberger 1984) and ostensibly income or wealth. In other words, as the consumer demand in the family increases (which is measured by the consumer-producer ratio), the intensity of household labor also increases. This means that households are adjusting productivity to consumption.

Since I am interested in the effects of age and the number of children of couples on wealth and not the effects of household size and age composition on wealth, consumers and producers are defined here in terms of the number of children of couples and not the number of people in the household. A child consumer is defined as a child 13 years and younger. Conversely, child producers are defined as 14 years and older. While Bedouin children begin doing chores at an early age, they rarely begin productive work as either agricultural or manufacturing wage laborers before the age of 14¹⁹. I do not include children who died within the first year of life as consumers.

Thus, following Chayanov, but with the modifications described above, I measured the child consumer-producer ratio to determine the influence of child age and numbers on wealth. I used a MANCOVA model to test the association between consumer-producer ratio and household wealth. Age at marriage was used as a covariate.

The relationship between the consumer-producer ratio and wealth was significant among the Bedouin ($F= 6.6$; $df=1$; $p= .011$). However, the model explains only 7% of the variation in wealth in the total sample. Thus, it seems that child labor does not lead to an accumulation of wealth, but rather labor intensification or productivity (measured indirectly by ownership of the means of production) is a response to consumption needs of the family. This supports findings in Chapter 3, which found that differences in ownership of the basic means of production among the Bedouin are largely structural.

So if wealth differentiation displays some Chayanovian dynamics, but is largely structural, what does this imply in terms of understanding the relationship between fertility and wealth? First, wealth does not appear to shape fertility in any significant way. Second, fertility, particularly the dynamics of family structure, appear to be only weakly related to wealth. This suggests that parents are having children for reasons that are only in part related to economic motives.

Obviously questions concerning the value or meaning of children cannot be adequately addressed using statistical correlations *alone*. For, as Vayda (1995) persuasively reminds us, just because a beneficial consequence of behavior is observed (in this case wealth) that does not mean that the benefit in question either caused now or in the past the behavior (in this case high fertility) itself. In other words, wealth may simply be a by-product of having children that has little or nothing to do with peoples' desires or motivations for bearing children. While statistical evidence suggests that children exert a mild influence on wealth, the only way of adequately resolving this question is by doing better ethnographies of family building.

¹⁹ Even shepherd families employ their children as wage laborers since herding is not a very labor-intensive activity. Based on informants accounts and participant observation, it seems that a herd of 200 can be

Ethnography can provide important theoretical insights into childbearing and should not solely be seen as “thick description” that merely adds exotic background or decorative flair to a quantitative demographic study. Within anthropology, there is still a strong distinction between etic/emic perspectives, which sometimes leads to the rejection of native explanations and the privileging of Western scientific observations. Hallpike similarly warns of using *post hoc* rationalizations that treat any kind of “good” result or outcome of a behavior as a sufficient and obvious explanation for its existence. He describes such functionalist accounts in anthropology as follows:

‘function’ has frequently the covert significance of ‘What a twentieth-century materialist rationalist intellectual from Europe or America thinks is a sensible allocation of labor and resources’. When such a person encounters primitive societies, he is baffled by their indifference to *his* criteria of what is sensible, and therefore casts about for some hidden reason which will be the *real* explanation for their behavior (Hallpike 1973: 459).

The question thus arises: how do the Bedouin view children? The second section examines the cultural meaning of children in Bedouin society in order to better determine whether children are valued because they are economic assets or important sources of labor assistance.

Section 6.2: The Cultural Meaning of Children

Are children largely viewed as a source of wealth in Bedouin society? I explored this question in surveys, open-ended questions and oral histories. In terms of structured questionnaires, I asked participants to indicate whether they agreed/disagreed/don’t know with statements about family formation. With regard to wealth and fertility, I stated:

managed by one shepherd. However, among the Bedouin of the Bekaa, women tend to do the milking.

“Children are a source of wealth”. Out of 240 women surveyed, 55% agreed and 41% disagreed with the statement and 4% responded with “don’t know”. There were no statistically significant differences in individual’s responses based on age, wealth or form of production.

While there is a slight preponderance of those who agreed with the statement, in examining the surveys, I found that at least four women who agreed also went on to make comments which qualified or clarified their position. The qualifying responses include: “Yes, but a house full of children is better than a house full of money”; “Children are just good”; “Yes, but it is as the Quaranic expression says: “children are the beautification of life and earthly existence”; “Children are good for many reasons”; “Children are sometimes a burden on their parents but without children life is meaningless.”

Thus, while a slight majority of respondents agreed that children were a source of wealth, many still insisted that children were generally valued anyway and for reasons other than wealth. In oral histories and unstructured interviews I conducted during the latter part of my fieldwork I asked people to comment on the value of children. I simply asked: “Why are children important?” Below are quotes, obtained from both male and female interviews and oral histories, which describe in the words of people themselves the multiple values of children. I have organized these quotes into three major categories. The categories describe the importance of children for 1) labor assistance 2) lineage or sociopolitical structure; and 3) gaining social respectability as well as companionship and happiness as defined by cultural ideology of the family. The more frequent responses are highlighted with asterisks. Three asterisks indicate statements found in at least 50% of interviews, two asterisks indicate statements found in 30-50% of interviews, and one

asterisk denotes statements found in less than 20% of interviews conducted with men and women.

Children for Labor:

“Children are our partners in labor” **

“Count your men and arrive at water”

Children for Lineage Defense, Continuity, Strength and Honor:

“Sons are necessary to carry on the family name” or “The sons of your sons are yours, but the sons of your daughter are not” or “Those who have children do not die” ***

“In the event of a feud, it is better to have more sons than the opposing side” **

“Sons are necessary to protect the family and its honor”*

“A society without fighters will fragment and disintegrate”

Children for Acquiring Social Respectability, Companionship and Happiness:

“A house full of children is better than a house full of money” ***

“Children will help you in your old age” ***

“Children are the beautification of life and earthly existence” (Quaranic verse) ***

“The number of children we have is in God’s hands” ***

“Children make you happy” *

“Men are the foundational base; women are paradise” (Quaranic verse)

“Those who have children have *kohl* in their eyes” (i.e., Children make you proud and happy and hence beautiful)

“He is thick-skinned who has no children”

“Eating at a table with a large number of place settings is better than eating on a table with only a few”

“Without children you have no base in society”

It is apparent from local accounts that children have multiple meanings in Bedouin society. Children are important for strengthening, defending and maintaining the continuity of the family and tribal lineage, for assisting their parents both in old age and in production, for meeting religious obligations, for completion of individual adulthood as well as social fulfillment and companionship. Thus, while assistance in labor is important, there seems to be more involved in family formation than simply striving to bear children for economic benefit.

Responses in particular highlight the importance of tribe and cultural ideology surrounding the social life cycle of the family. Within Bedouin society, to have no children is to remain in a liminal social status removed from adult social respectability, human compassion, and happiness. Children allow individuals to gain the respect of their peers. The opinions and counsel of adults who have children are heeded to a greater degree, allowing for their full participation in social negotiations or discussions within the tribe. As one man said to me: “If you do not have children, people do not consult you or seek your opinion on problems.” Individuals who have not managed a household and raised children are considered somehow socially deficient. Furthermore, they are “thick-

skinned” and do not understand the emotional sentimentality or the griefs and joys that come from bearing and raising children.

Individuals also discuss how when they are nearing “the end of their life” children will help take care of them and support them. Having children guarantees that one will not want for anything and will not die alone. Parents emphasize the companionship and happiness that children bring. A small family is viewed as being a lonely family. Conversely, a large family is “strong, secure and happy”. It is difficult to understand Bedouin family ideology without confronting the importance of tribe. How does tribe contribute to understanding high fertility or cultural beliefs in the desirability of large families?

First, in patrilineal tribes, sons are needed for carrying on the family name and guaranteeing the continuity of the lineage. Second, children both male and female through *ibn ‘amm* marriage can create important nuclei of support, solidarity and mutual defense. Third, to defend and protect one’s family and agnatic segments requires warriors or sons. The more sons or males one has at different levels of tribal organization, the greater advantage one has in the event of a feud.

The egalitarian tribal structure of Bedouin society itself (discussed at length in Chapters 4) may be most important for understanding why wealth and form of production are *not* important harbingers of Bedouin fertility. The next section looks more carefully at parity distributions both among the Bedouin and other egalitarian social systems so as to determine whether or not egalitarian societies have similar demographic structures.

Section 6.3: The Demographic Structure of Egalitarian Social Systems

If we look at the distribution of fertility in Bedouin society and of other egalitarian natural fertility populations, we discern an interesting pattern. In Chapter 5, we described the similarity in age patterns of fertility, first noted by Henry, said to characterize natural fertility populations. However, there was no discussion of patterns in terms of the mean *and* variance of age-specific fertility rates cross-culturally. Table 6.2 shows the distribution of age-specific cumulative fertility (the number of live births ever produced by an individual of any specified age) among five natural fertility populations. Although these populations have different levels of fertility, they are similar in that the variance in female cumulative fertility is roughly equal to the mean for each age.

Thus, women within each population are strikingly homogeneous in their reproductive experience, both among themselves (as shown by their low variances) and with respect to age (as shown by the linear increase in their cumulative fertility). The distribution of total fertility (whether a period or cohort measure) is consistent with these conclusions (see Table 6.3 for a look at age-specific fertility rates of post-reproductive women). In Table 6.2, we see that the female age groups 40+ do not differ significantly in their mean cumulative fertilities. The fact that the sample is well described by a Poisson distribution is strong evidence that there is no heterogeneity due to age in this sample, but rather that there are little or no systematic differences of any kind among women in their total fertility (for similar discussions see Wood, Johnson and Campbell 1985: 63; Howell 2000: 124-125). This means that women who survive to the end of the reproductive span have had equal chances of reproducing. The question that arises is, how invariant is this pattern? Does this pattern only characterize women in nonWestern nonstate societies?

If we examine data from Western industrial populations, we find a slightly different pattern. Table 6.4 shows the mean and variance in the number of live births to women in 14 English parishes. There is greater heterogeneity by age in this sample. However, the data is highly aggregated and does not allow us to look at local intrasocietal or intracultural variation. A second drawback with this data is that while parish registers of baptisms, burials and marriages are plentiful in Europe from the middle of the sixteenth century, censuses are not available until the nineteenth century. Thus, we know the number of vital events in these populations but not the number of persons at risk. While a larger sample of fertility distributions from both state and non-state societies (preferably with less aggregated data) is needed to verify these differences, the data seems to suggest that more egalitarian less-hierarchical societies tend to have more equal or uniform reproductive experiences.

Given that the societies depicted in Table 6.2 do not have identical modes of production or similar levels of economic inequality, it seems that reproduction may be more responsive to sociopolitical stratification. However, if further research, using less aggregated data, reveals that traditional European societies exhibit the same pattern, then the more likely explanation is that prior to the encounter with the capitalist mode of production, demographic regimes in each society are characterized by cultural homogeneity of reproductive experience within but cultural difference without. To the extent that this pattern is or is not confirmed in a larger sampling of populations, it does characterize the Bedouin and other egalitarian societies, leading one to conclude that demographic structure and sociopolitical structure may be interrelated.

While the demographic structure of Bedouin society is relatively egalitarian, this does not mean that demographic variation is absent internally. Within the population, there are differences in natural fertility between individuals, largely due to physiological differences in the onset of age-specific sterility. Table 6.5 shows the age-specific percentages of sterility (lack of childbearing from that age on) for married women in four natural fertility populations, including the Bedouin. The percentage of Bedouin women who had completed childbearing at each age was computed for 42 women 45 years and older. The percentages sterile at younger ages are comparable for the Bedouin and five European populations (see Henry 1961). The decline with age is nearly flat for both Bedouin and European groups. Rural Japanese women have a higher rate of sterility by age, which remains unexplained. The !Kung have the highest rates of sterility by age, which is caused by widespread venereal disease among both younger and older women (Howell 2000: 162).

The early onset of age-specific sterility among individual Bedouin women appears to be due to complications experienced by some women in childbirth, genetic differences in reproductive potential, and for one woman in the sample, lack of sexual relations due to early widowhood. Among the Bedouin, venereal diseases are virtually nonexistent and are not believed to contribute to the premature loss of women's reproductive ability. Poisson loglinear regression (controlling for age at marriage) was used to examine the statistical relationship between the onset of age-specific sterility and fertility among 42 ever married women ages 45 years and older in 2000. Table 6.6 summarizes the results of the regression analysis. The Poisson regression results suggest that the age at onset of sterility affects the number of children ever born. The results are

statistically significant at the .01 level; thus, we can reject the null hypothesis that in the population there are no significant differences in parity among women according to onset of age-specific sterility. Since Poisson loglinear regression and ANCOVA models both yield similar results, we can use ANCOVA to calculate R-squared and give us an approximation of the variance explained. The independent variable, the age at onset of sterility, accounts for 46% of the variation in the dependent variable, parity, in the sample.

While intrasocietal or intrapopulation differences in Bedouin fertility may be minimal and largely due to biological factors, this does not imply that sociocultural factors are not important at other scales. The last section underscores the importance of scale in discussions of class-specific demographic differentials.

Section 6.4: Class and Demography: The Question of Scale

While class relations may be absent or exert weak influence on reproduction at one point in time and space, this does not mean that class does not help explain reproductive variation at broader scales, where there is evidence of exploitative class relations among groups. For example, class-like exploitation of the labor of indigenous peoples has been used to explain why some indigenous populations experienced fertility increase in conjunction with colonialism. For example, Alexander (1986) shows how the high demographic increase in nineteenth and twentieth century Java is related to colonial pressures which removed men from subsistence agriculture to work on Dutch sugar plantations.

With the removal of men from subsistence agriculture, women had to intensify their labor in the rice paddies of their village (and sometimes on plantations as well), which had the unintended consequence of destabilizing women's traditional patterns of intensive breast-feeding and associated long intervals between births. The Dutch exploitation of indigenous labor was thus the impetus behind fertility increase in Java and differences in childbearing between colonialists and the indigenous population.

The same class and ethnic differences seem to characterize the Bedouin and peasants in the Bekaa Valley, Lebanon. Agricultural wage labor in the Bekaa Valley is undertaken by Bedouin (both Lebanese and Syrian) nonBedouin Syrian (landless peasants) and Turkish Kurds. Among the Bedouin, regardless of the household form of production (whether they rely on shepherding, farming or wage labor), Bedouin children upon reaching a particular age (13) begin actively assisting family members in labor. While one might be tempted to argue, as many have, that sharecroppers utilize child labor more than pastoralists due to the lower labor requirements of pastoralism, such a scenario is not supported by Bedouin data (see Chapter 5).

Thus, regardless of form of production, as children reach a certain age, they usually begin working as seasonal agricultural laborers or assisting their parents with farming or pastoralism. While girls work in groups with other female and male relatives, boys oftentimes sell their labor on a more individual basis. For instance, many sell their labor to gas station owners, car mechanics or local chicken or cheese factories.

Lebanese peasant families whether professionals, petty capitalist merchants, large landowners, smallholders or wage laborers do not employ their children as agricultural wage laborers. Work as a hired laborer in agriculture is socially and culturally devalued

in Lebanese society and undertaken by other ethnic and class groups (whether Bedouin, Syrian or Kurdish). Thus, it is possible to argue that one reason fertility, particularly among women over 40, is high is due to peasant exploitation of Bedouin labor, particularly child labor in agriculture, which is in turn related to broader ethnic and class relations in Lebanese society. This does not necessarily imply that couples are spacing children more closely only to acquire needed labor assistance for maintaining a viable household. Rather, high fertility may also be an indirect consequence of work patterns and the division of labor in the community. With children working as wage laborers, women may be left with more work, which, in turn, reduces the duration of breastfeeding and leads to more closely spaced births.

Daher (1992) describes how many villages in rural areas were emptied of their young workforce between 1980-1990 (p. 44). A survey carried out in Baalbek and Batroun found that 88% of the agricultural workforce was over 60 years old due to both internal migration and emigration to foreign countries (ibid.). This suggests that Bedouin labor may have filled an important void in the regional economy since the 1980s.

Demographic data from UN surveys in the Bekaa do suggest significantly lower fertility among nonBedouin Lebanese. Cohort fertility rates among women born in 1947-1951, who had virtually completed their childbearing by the time of a 1996 survey, was found to be 5.86 in the Bekaa (Saxena and Kulczycki 1998). This study does not examine variation among various sectors of the population and so the total fertility rate may blur important class or regional differences within the population. Further, it is difficult to gauge the exact timing or motivation for fertility decline among peasant women in the Bekaa without further anthropological study.

The crucial point here is that just because class relations may provide little understanding of demographic difference at one scale, this does not mean that class is unimportant in explaining demographic variation at other scales. Thus, it is necessary to consider the articulation of modes of production at different scales when examining the relationship between production and reproduction.

However, the question still remains as to why fertility levels are so high among the Bedouin in comparison to other populations? Campbell and Wood (1988) examine the distribution of total fertility rates for 70 natural fertility populations and find that 90 per cent of the variation in natural fertility TFRs falls between four and eight (p. 44). The authors go on to suggest that those populations in the sample with TFRs above eight can be considered colonizing populations, that is, populations undergoing rapid expansion after moving into new habitats containing few or no human competitors. Does this scenario fit the Bedouin?

In some sense, it is possible to argue that the Bedouin are a frontier population since, over the last 30 years, they have undergone sedentarization and established their own villages/hamlets, neighborhoods or rural enclaves in the Bekaa. The Bedouin may also be said to have filled an *economic* niche in the regional economy. However, while the Bekaa is sparsely inhabited in comparison to other parts of Lebanon, it is still problematic to argue that the Bekaa is an “empty” landscape in the same way that the western U.S. was for Mormon or Hutterite groups (who also display TFRs above eight). It is useful to consider historical estimates of fertility so as to determine the antiquity or novelty of high fertility among the Bedouin. Although there are no historical estimates of

Bedouin fertility (i.e., the Bedouin were not included in the 1932 census) we can consider indirect estimates of fertility.

In order to address the question of historical levels of fertility among the Bedouin, I used a technique formalized by Harpending and Draper (1990) referred to as either indirect estimates of fertility or the frequency of family sizes. This technique allows for estimation of fertility in the generation of the parents of a set of informants. In terms of the set of data to be presented, I asked informants whose mothers were either post-reproductive or post-reproductive at the time of their death: how many live births did your mother have? The method is not restricted to live births but could be applied to any stage of the life cycle. Women were highly informed as to their mother's number of live births. They reported live births with great ease and confidence.

The technique entails estimation of the true distribution of parity among mothers by assigning unit weight to those with one child, a weight of one-half to those with two children, and so on. With this method a mother is counted once every time she is reported by one of her offspring. You then sum the number of informants and divide by the sum of the weighted values to obtain an indirect estimate of fertility of parents.

Of course, there are several potential sources of bias in this technique. Specifically, if mortality is selective with respect to fertility then women who have higher fertility may have died before reaching menopause, leading to an underestimate of completed family size (CFS) in the parents. There is also the possibility that some individuals will not recall all of their mother's births, again biasing CFS downward and elevating the reported prevalence of small sibships. Notwithstanding these difficulties, it is still useful to derive some estimate of fertility in the distant past to generally assess

whether or not very high fertility among the Bedouin is a recent phenomena or of some antiquity.

To examine temporal trends in fertility, I grouped the data into three birth cohorts, 1899-1933 (average year of birth is 1925), 1934-1943 (average year of birth is 1938), and 1944-1951 (average year of birth is 1948). Standard errors were also computed using the formula in Harpending and Draper (1990:199). Figure 6.1 shows the results. It appears that the oldest women had the lowest fertility, with indirect estimate of completed family size of 6.81 with a standard error of .30, giving the following confidence limit for the fertility of parents: $6.5 \leq \hat{\mu} \leq 7.1$. There is an increase in mean completed family size of 1.5 births for women born between 1934-1943. These women have a mean imputed family size of 8.3 with a confidence limit of $7.9 \leq \hat{\mu} \leq 8.7$.

There is a slight decline in fertility among women born between 1944-1951, which, judging from direct estimates for similar cohorts, does not appear to be real (see below). Women among this cohort have a mean imputed CFS of 7.7 with a standard error of .53, giving a confidence limit of $7.2 \leq \hat{\mu} \leq 8.2$. There is considerable overlap in the imputed (indirect) CFS estimates among the youngest women; hence, it appears that the major historical increase in fertility among Bedouin women occurred among women born during the end of the French Mandate and marrying around the early independence period²⁰.

²⁰ Chapter 1 also details some of the historical changes occurring during this period. The transition to sheep-rearing had already occurred by this time and a more sedentary form of pastoralism involving yearly summer contracts with peasant farmers had emerged. It is likely that the peasantization and proletarianization of child labor led to changes in the fertility of married women. Greater child involvement in wage work, particularly the involvement of Bedouin daughters in agricultural wage labor may have been important. With children increasingly involved in wage labor, women may have been left with more work responsibilities, leading to an earlier cessation of breastfeeding, which, in turn, decreased birth spacing and increased fertility.

If we compare direct and indirect CFS estimates for similar but not identical birth cohorts of Bedouin women, we find that the indirect estimates reveal a lower CFS by one birth. The direct CFS estimate of 8.8, found for women born between 1946-1955 (average age at birth of women is 1952) is higher than the indirect estimate of 7.7 for women born between 1944-1951. Sampling error is a likely explanation for the lower indirect CFS estimates as is the potential bias introduced from mortality. Nevertheless, if we examine the fertility distributions of both estimates, we find that they are quite similar.

Figure 6.2 compares the distributions of direct and indirect estimates of completed family sizes of women in these relatively similar birth cohorts. There is a higher frequency of sibships in the 13+ category in the direct estimates of CFS and a lower frequency of the sibship size of two. However, the imputed distribution closely approximates that of the direct family size distribution and includes the peak at parity ten.

Figure 6.3 compares the family size distributions from direct estimates of CFS of women born between 1946-1955 and indirect estimates of CFS of older women born between 1934-1943. Not only are the mean imputed family size (8.3), and the mean parity of the directly obtained family size distribution (8.8) quite similar, but both distributions are quite similar. Again, both distributions reveal the same modal completed family size of ten.

These results indicate that high fertility (close to an average of eight births) is characteristic of women born between 1934-1960. Thus, high fertility seems to characterize Bedouin couples who were beginning their family-building during a brief historical period which coincides with the peasantization of Bedouin society and the rapid

commercialization of agriculture and landholdings in the broader regional and national economy.

Explanations for high fertility must pay attention to both the biosocial and political economic context in which high fertility occurs. Women born prior to 1934 have family sizes that are within the range described by Campbell and Wood (1988). Again, there is also recent evidence of fertility decline among younger women (see Chapter 5). In short, populations with TFRs above eight should not automatically be deemed colonizing populations. It is important to understand both the biological and political and economic context of very high fertility.

Conclusions

Thus, in terms of theorizing Bedouin fertility, it is clear that form of production does not predict or explain variation in fertility within Bedouin society. However, exploitative power relations whether related to class, ethnicity or both may still help explain demographic variation at different scales. In terms of the relationship between wealth and fertility *within* Bedouin society, *wealth does not exert a relationship on fertility, hence it is possible to conclude that among the Bedouin, reproduction is not responsive to economic inequality per se*. Nevertheless, fertility does exert an influence on wealth, albeit a moderate one. Ethnographic data further reinforces that while there are some economic motivations for childbearing (particularly children as partners in labor), such stimuli remain weak or incomplete explanations for Bedouin fertility. More than just economic assets, children are central to family ideologies of happiness and social

respectability. In particular, children are important for maintaining lineage strength, defense and continuity.

But perhaps most significantly, in spite of the great diversity in levels of fertility cross-culturally, there is still a striking degree of reproductive uniformity *within* Bedouin society and other traditional egalitarian societies prior to transition. However, the robusticity of this pattern needs to be verified for a larger sample of historical populations from both egalitarian and stratified ends of the sociopolitical spectrum in order to determine whether or not fertility is responsive to milder forms to social stratification or to exploitative social class relations engendered by the capitalist mode of production in particular. While fertility levels among the Bedouin have been high for some time, TFRs above eight appear to be of shorter duration and coincide with a period of major political-economic change in the Bedouin social economy.

**PART III: DEMOGRAPHIC REGIMES AS SOCIOPOLITICAL AND
CULTURAL SYSTEMS**

CHAPTER 7: CONCLUSIONS

This chapter summarizes the overall findings of the dissertation and examines the contributions of the present study to anthropological demography, pastoral studies and Middle Eastern ethnology on Bedouin women.

Section 7.1 Dissertation Summary

Recent contributions from the political economy of demography have highlighted the class-specific pattern of demographic transitions in Europe. That is, researchers have found that episodes of class formation closely coincide with differential demography of emergent classes (Schneider and Schneider 1996: 8). Such processes of class differentiation are in turn strongly tied to “boom” and “bust” cycles of capitalist development in agriculture and industry during the late eighteenth and nineteenth centuries (ibid. 200). European demographic transitions both in their historical timing and political economic causality have class-specific trajectories at the local community level.

Outside of Europe, the relationship between class and fertility remains poorly explored. The difficulties in theorizing class in nonWestern societies are both conceptual and empirical. First, there is a dearth of high quality demographic data of historical depth in nonWestern societies. Second, anthropologists interested in the evolution of social stratification and class stratification in particular oftentimes do not agree on the meaning of key concepts such as “class” and “egalitarianism/inegalitarianism”. While some anthropologists take a more piecemeal view of inequality where one form of inequality is

used to shed light on an entire social system, other anthropologists employ stricter definitions of inequality in which the totality of social relations are considered.

Definitions of class in political economy and political anthropology posit economic inequality as necessary, but not sufficient for designating class groups. So while class divisions imply differences of wealth (Bradburd 1990), differences of wealth do not necessarily imply class divisions (Irons 1992; Salzman 1999). Central to understanding the evolution of class inequality is the labor process. The major distinction between class and nonclass relations is that the former entails exploitative social relationships where use of a surplus product by a group which has not contributed the corresponding surplus of labor reproduces the conditions of a new extortion of surplus labor from the producers (see Bradburd 1990; Laclau 1977; Dupre and Rey 1982). Pastoral and peasant pastoral societies where class relations are discernable tend to predominantly rely on hired labor for herding, as opposed to family labor or cooperative labor (see Section 7.2).

Chapter 3 reveals that within Bedouin society, both farmers and pastoralists rely on family labor. Pastoralists sometimes hire Syrian shepherds, but most rely on the nuclear family or children from the minimal lineage for herding. Sharecropping is also constructed around the household as the unit of labor supply, although again children from within the minimal lineage unit provide some cooperative labor assistance (the latter does not involve cash payment).

Chapter 3 finds that while there are no class relations within Bedouin society, class tensions are discernable in Bedouin-peasant relations, particularly over the last two decades. A brief historical overview of Bedouin-peasant relations in Chapter 1 revealed

that class divisions between the two groups is at least in part due to the reduction in cooperative relations of interdependency. The commercialization of agriculture, land scarcity and speculation, and mechanization of transport transformed Bedouin-peasant relations.

First, the spread of fruit crop production in the Bekaa in the 1960s and early 1970s, meant that damage to fruit crops by Bedouin flocks of sheep and goats became a greater concern. Second, increased reliance on purchased fertilizers, insecticides, and so on meant that peasants were no longer reliant on Bedouin flocks for fertilizing their fields. Third, with the spread of motorized transport in the 1960s and 1970s, camel service was no longer required for transporting harvests. In addition, as a result of land scarcity and speculation, Bedouin cooperative labor activities with peasant farmers (e.g., assisting with summer harvest and transport of crops in return for access to grazing land) were altered. Grazing arrangements since the 1970s increasingly involve rental via cash payment.

Perhaps the most important of these social transformations for understanding Bedouin-peasant relations was the mechanization of transport and process of villagization. The replacement of camels with trucks radically reduced the number of seasonal migrations (although migration patterns were initially reduced during the French Mandate). The reduction of yearly migrations led to greater work opportunities outside of pastoralism so that daughters and sons extended their activities as wage laborers in agricultural and agro-industrial production.

The mechanization of transport also accelerated villagization among the Bedouin. Bedouin families faced with diminishing pasture land and greater productive activities in

the Bekaa began to purchase land for household construction. The process of villagization was to have a major impact on Bedouin production. In order to purchase land, many Bedouin families sold their flocks, leading to alienation from the means of production in livestock, which in turn paved the way towards greater peasantization and proletarianization of Bedouin labor (although in terms of child labor proletarianization is the predominate pattern).

Thus, due to capitalist developments in agriculture, and subsidiary processes of mechanization and villagization, there were major changes in the labor process that involved both Bedouin and peasants. Such fundamental changes in the labor process (i.e., the purchase of labor as a commodity and capitalist expropriation of surplus labor in the form of surplus value in the valorization process), have led to the rise of class relations between Bedouin and peasants in the Bekaa. Class tensions among peasants are expressed in religious and cultural idioms that emphasize religious cleanliness, reputation and cultural dialectical differences. However, in contrast, the Bedouin assert their religious identity as Muslims, their national identity as Lebanese and overall modernizing lifestyle as cultural-symbolic affirmations of unity with broader peasant society.

Chapter 4 draws upon the social and political structure as well as the gender system of Bedouin society to understand in greater detail why the Bedouin are not more stratified *internally*. The discussion emphasizes how segmentary tribal organization with its kinship structure, marriage system and political authority promotes egalitarianism and individualism within Bedouin society. While some anthropologists have argued that egalitarianism is a myth, it is clear that there are both historical and cultural differences in

how segmentary kinship and political structure affect social relations and social stratification.

Among the Bedouin, it appears that egalitarianism is, in part, an asserted tribal ideology socially and culturally articulated in the face of economic inequality. Such an ideology is tied to and made possible by political geography, particularly the historical presence of small and weak regional states in the Middle East.

In addition, because the Bedouin as a group are land-poor, there is little basis for exploitative social relations to develop. Without land, it is not possible to “hire in” agricultural wage laborers or arrange for sharecroppers to perform labor in exchange for a portion of the crop. Similarly, Bedouin pastoralists rely on peasant landowners for renting grazing land for their flocks. Thus, poverty of the means of production in land has helped prevent potentially exploitative relations from developing within the community.

Secondly, cultural beliefs surrounding work-honor mean that Lebanese Bedouin never sell their labor to other Lebanese Bedouin employer-shepherds and employer-shepherds never “hire in” labor of Lebanese Bedouin pastoralists. Lebanese Bedouin only sell their labor to Lebanese peasants (Syrian Bedouin shepherds do sell their labor to Lebanese Bedouin employer- shepherds). This cultural practice is incontrovertible and serves as a kind of sociocultural leveling mechanism *within* the Lebanese Bedouin community.

Chapter 4 also examines the gender system among the Bedouin of the Bekaa. While Bedouin men and women are not *equal or the same* in terms of the opportunities or rights/obligations afforded by their social roles, the overall gendered division of labor and symbolic culture emphasize interdependency and complementarity between the sexes.

With an overall understanding of Bedouin social economy and sociopolitical organization in hand, Chapter 5 provides an overview of Bedouin demography. The demographic structure of the total population is marked by high fertility and moderate-low mortality. High fertility is achieved by a combination of early weaning and marriage, low rates of marital dissolution, and low levels of primary sterility. Moderate-low mortality is in large part related to the widespread availability of high-quality protein-rich weaning foods, particularly sheep and goat milk, and the presence of local clinics with well-trained midwives. The chapter then examines the central question of the dissertation research: do different forms of production have their own demographic regimes? Analysis reveals that different forms of production do not have their own demographic regimes.

Chapter 6 attempts to explain this central finding in greater detail. The discussion carefully considers economic arguments that emphasize the role of children in the family economy, particularly children as a source of labor assistance. Both quantitative and ethnographic analyses suggest that there are some economic motivations behind childbearing. However, while children are valued for their role as laborers, there are other parallel motivations behind childbearing. In Bedouin tribal society, children are important for maintaining the continuity, strength and defense of the lineage. Children are also central to cultural definitions of family, social respectability, adulthood, and happiness.

Perhaps most interesting, further examination of the demographic structure in Chapter 6 reveals a striking cultural homogeneity in the reproductive experience of Bedouin women. The fertility distribution of the Bedouin population indicates that women have equal chances of reproducing at each age. A similar pattern is found in

several other traditional egalitarian societies. While it is not clear to what extent this pattern characterizes the fertility experience of women in more stratified or hierarchical social systems, this pattern suggests an overall similarity or equality in the reproductive experience of Bedouin women and women in other acephalous societies. Thus, it seems that the demographic structure of Bedouin society mirrors the overall egalitarian structure of Bedouin polity and social organization. The Chapter closes by highlighting the importance of scale. Specifically, it is pointed out that class differences in fertility while absent locally are present between Bedouin and peasant groups in the Bekaa Valley, Lebanon.

While the present study confirms the presence of class differences in fertility between land-poor Bedouin agro-pastoralists and peasant landowners, there is no evidence of class or demographic divisions within Bedouin society. Instead, the distribution of fertility reflects the egalitarian structure of Bedouin society. Such local level equality is best understood as the interplay of 1) local kinship/segmentary structure and cultural practices; 2) regional Bedouin-peasant socio-economic relations in the Bekaa and 3) tribe-state relations in the Middle East.

While demographic findings from historical Europe clearly contribute to our understanding of the role of class in demographic transitions, research in nonWestern societies is crucial for developing a more inclusive theory of demographic transitions in time and space. The current research highlights the need for additional theoretical structure in the political economy of demography that accounts for differences of scale. In particular, studies must pay greater attention to the patterning of fertility in nonWestern societies, which entail the articulation of modes of production, distinct forms

of sociopolitical organization and stratification, regionally-specific cultural histories, and differences in individual life histories.

Section 7.2 Significance of the Research

This section discusses the study's contributions to broader theoretical questions in anthropological demography (particularly political economy of demography), pastoral studies, and Middle Eastern ethnology.

Anthropological Demography: Political Economy of Demographic Transitions

Explaining cross-cultural and historical patterns of diversity in demographic transitions is the focus of much anthropological demographic research. Anthropological demography has upheld the primacy of anthropological methods of inquiry in understanding why human populations have passed through these various historical periods of change in their reproductive behavior.

The political economic study of demographic transitions emphasizes the cultural, political-economic and historical context of micro-reproductive behavior. Political economic research has demonstrated how the forces behind family building are often embodied in cultural institutions and political-economic structures not individual characteristics. The coordination of reproduction cross-culturally through institutions of marriage and breastfeeding is well documented in anthropological demography (Campbell and Wood 1990). Micro-economic models often treat human reproductive behavior as context free and marked by discrete mechanical and hyper-rational decision-making. Political economy, however, emphasizes how childbearing is rarely if ever divorced from broader cultural and historical processes.

Exploring if and how demographic processes are contingent upon culturally and historically-specific production regimes—whether capitalist, noncapitalist or a combination thereof—is crucial to developing a more rigorous anthropological demography and political economy of demography in particular. The demographic literature in political economy has largely focused on capitalist mode of production, which is based on a division of classes. Koster and Chang (1994) point out that the continued coexistence and articulation of noncapitalist and capitalist modes and forms of production long after the increasing penetration of a commercial economy has been a problem for anthropological theorizing in general. They recognize that elaboration of the concept of articulation of modes of production in the 1980s, helped to challenge simplistic conceptions of capitalism found in both modernization and world-system theory (Koster and Chang 1994).

It is increasingly recognized, even by world system theorists (see Smith Wallerstein and Evers 1984) that capitalism has not simply weeded out alternative modes. The complex articulation of modes of production is characteristic of production in the Bekaa both historically and today. Both capitalist and sharecropping modes of production (the latter may be considered a specific peasant mode of production) exist side by side in the region. The central contribution of the present study in theorizing the class-specific trajectory of fertility decline lies in differentiating the scale at which various systems of production impinge upon fertility and mortality. Cross-cultural and historical research in societies with different modes of production and different experiences of class exploitation and divisions provide a more complete understanding of the dynamic relationship between class formation and demographic transitions.

In Bedouin society, micro-reproductive behavior is not responsive to differences in local forms of production. However, the statistical relationship between children and household wealth for the total population, the cultural importance of children in family labor, regional differences in Bedouin fertility, and Bedouin-peasant differences in fertility all suggest that Bedouin aggregate fertility is responsive to broader modes of production, particularly greater reliance on agriculture.

At the proximate level, breastfeeding practices are crucial to understanding the reproductive ecology of high Bedouin fertility. Historical fertility estimates reveal that high Bedouin fertility is of brief duration in the long *durée*, covering less than a thirty-year period (1934-60). Such high fertility may be a consequence of changing breastfeeding patterns that accompanied the diversification of the Bedouin economy and greater demands on women's labor. Differences in fertility are also discernable between a landless Bedouin population and landowning Lebanese peasants. The latter suggests the presence of class-differences in fertility in the regional social economy. Class relations and class fertility differentials appear to be regional rather than local phenomena in the current context.

Thus, in terms of broader social forces, greater involvement in commercial agriculture may have paved the way toward high fertility among the Bedouin of the Bekaa. Other political economic and general anthropological demographic studies have revealed a similar increase in fertility with agricultural intensification (Cleveland 1986: 291; Weil 1986: 313; Hayden 1986: 176-95; see also Sellen and Mace 1997). In the Bedouin context, the peasantization and proletarianization of their social economy seems to have gone hand in hand with Bedouin fertility increase and Bedouin-peasant class

distinctions in fertility. Also, there are important regional differences in fertility among Bedouin groups.

The Bedouin of the Bekaa have a higher TFR (8.9) than both the Rwala Bedouin of Saudi Arabia (4.9) (Henin 1968, 1969) and the Regeibat Bedouin of the Negeb (5.5) (Muhsam 1951). It is difficult to determine with certainty which of the proximate mechanisms of fertility explain the variation between groups, since such data is largely unavailable. However, there is some evidence to suggest that differences between the groups are not due, at the proximate level, to differences in age at marriage. There appears to be considerable regional similarity in the average age at marriage among Bedouin tribes of the Syrian Desert —approx. 18 years old.

A common Bedouin marriage pattern suggests that regional differences in fertility may be due to variation in the onset of weaning, which may in turn be related to regional differences in women's work patterns. Thus, a mixed agro-pastoral economy with its more labor-intensive agriculture may be responsible for the higher levels of fertility among the Bedouin of the Bekaa. Both the Rwala and Regeibat Bedouin predominantly rely on pastoralism for their livelihood. This supports the findings of Sellen and Mace (1997) who find that agriculturalists have higher fertility than nonagriculturalists. Using a phylogenetic analysis, the authors find that dependence on agriculture is the strongest predictor of differences in fertility between closely related cultures, corroborating the finding that increased dependence on agriculture is associated with increased fertility across human populations.

However, within the Bedouin population of the Bekaa, demographic equality or homogeneity has been maintained by culturally shared patterns of marriage and

ostensibly breastfeeding. Intrapopulation or intrasocietal differences that do exist seem to be due to physiological differences between individuals in the onset of age-specific sterility. Campbell and Wood (1988) and Wood (1990) argue that most of the interpopulation variation in total fertility rates among societies that do not use modern contraceptives is due to differences in age-specific patterns of marriage and the intensity and duration of breastfeeding. These are largely cultural responses with important underlying physiological effects.

Wood (1990) argues that intrapopulation differences (i.e., differences between individuals within a population) may largely be due to more strongly physiological mechanisms (i.e., those less amenable to cultural modification such as changes in the capacity to conceive and rates of fetal loss). Research in Highland New Guinea indicates that fetal loss is important in understanding within-population variation (Wood and Weinstein 1990). Among the Bedouin, fetal deaths have no significant statistical effect on fertility; however, the onset of age-specific sterility among married post-reproductive women explains a substantial amount of the intrasocietal variation in fertility. Thus, as Wood (1990) suggests, the risk of fetal loss and age-specific sterility may be most important in understanding intrapopulation variation in natural fertility. To understand uniform Bedouin fertility, one must understand the sociocultural system, particularly egalitarian segmentary structure and tribal ideology.

Cavalli-Sforza and Bodmer (1971) predict that parity distributions should generally fit a negative binomial distribution, which have a variance approximately twice that of the mean. They reject the possibility that women have the same constant probability of bearing children, which implies application of a Poisson distribution

(Cafalli-Sforza and Bodmer 1971: 311). Instead, they suggest that it is only with conscious family planning that variance in the number of children is likely to decrease (ibid.). It seems that there is greater variation in the parity distributions of natural fertility populations than hitherto recognized. The level of sociopolitical stratification may help to explain societal differences in parity distributions prior to the onset of demographic transitions. Greater attention to the internal demographic structure of various sociopolitical systems is needed.

In sum, class differentials in fertility may be more spatially and historically varied than commonly recognized in anthropological demographic studies of demographic transitions. Intrasocietal demographic differentials may be minimal in more egalitarian, less hierarchical social systems and largely due to physiological mechanisms. Outside of Europe, there is some support for the idea that societies more internally differentiated have more variable demographic patterns. Aside from intrasocietal mortality differences between hired shepherds and employer shepherds found within Komachi society (Bradburd 1990), there is evidence of intrasocietal differences in fertility among caste-Hindus of West Central Nepal (Folmar 1992).

Taken together, findings from the current study indicate the importance of cultural institutions, political economic forces, and biological mechanisms in understanding human fertility. In short, a more conceptually and empirically rigorous anthropological demography points to the inadequacy of Malthusian and neo-Malthusian population thinking and the need for a new more complex biocultural synthesis. To understand the reproduction of marginalized groups or “the people at the bottom” (Orlove 1989: 309),

requires an understanding of both social relations and forces of production, cultural identity, history, and biology.

Pastoral Studies

Current discussions in the anthropological literature on pastoralism center on questions of how rapid commercialization and population growth as well as state encapsulation and forced sedentarization have impacted nomadic pastoral lifestyles around the world (e.g., Galaty and Salzman 1981; Bradburd 1990; Fratkin Elliot and Roth 1990; Campbell 1993; Chang and Koster 1994; Salzman 1999, 2000; Fratkin Roth and Nathan 1999). Given the far-reaching consequences that such political economic processes have had on pastoral social structure, political organization, settlement patterns, ecological resource use and mobility, adult and child health, and demography over the course of this century, such a focus is perhaps not surprising.

Theoretical efforts in pastoral studies have begun to focus on understanding cultural and historical differences in social structure, socio-political stratification and class relations. While some anthropologists pose that egalitarianism in pastoral societies is a myth (e.g., Borgerhoff Mulder and Sellen 1994; Fratkin, Roth and Galvin 1994; Roth 2000) recent discussions have clarified that many disagreements stem from different definitions of egalitarianism (see Salzman 1999, 2001). If researchers define egalitarianism as the presence of economic inequality then most pastoral societies are inequalitarian. However, Salzman (1999) and Irons (1994) have pointed out that economic inequality fluctuates immensely in many pastoral societies. Salzman (1999) defines egalitarianism on the basis of socio-political organization not economic inequality per se.

The theoretical question that remains unanswered is: under what cultural-historical and ecological conditions are egalitarian societies found? Irons (1994) proposes that egalitarianism is not due to the absence of economic inequality per se, but the absence of economic inequality over the long-term. Irons shows how in Yomut society, economic inequality in the form of patrimony does not predict wealth at the time of his survey. Rather, wealth fluctuates enormously and wealth differences largely even out through time—a situation which helps explain the society's egalitarianism. This leads Irons to suggest that social stratification may be more likely in contexts where economic inequality shows long-term structural effects. Thus, I chose to examine the effects of inheritance (i.e., indirect and direct dowries combined) at marriage on wealth in the means of production at the time of the survey.

Because empirical findings suggest the presence of structural economic inequality among Bedouin pastoralists, I am unable to account for egalitarianism using Iron's hypothesis. Nonetheless, there is a historical basis for egalitarianism among Middle Eastern tribes. Barfield (1990) shows how egalitarian lineage structures have long been indigenous to the region and are related to historical political geography, culture ideology, and ecology. Arabian tribes inhabit a region with a more limited set of resources that could support only relatively weak military forces. Their state political structures were more unstable and subject to regular collapse. Tribes in the Middle East were on more even terms when dealing with states, had greater autonomy, and were more egalitarian in both their kinship structure and cultural ideology.

While states in the Middle East have traditionally been divided into small regional states, Turco-Mongolian tribes reside in a region that was under the control of great

empires. Turco-Mongolian tribal systems are more hierarchical in their kinship and political organization, which consisted of hundreds of thousands of people under the authority of powerful khans.

Egalitarian tribes and small regional states appear to co-occur in the Middle East. However, there have been important political economic developments in modern history, which have reduced the politico-military autonomy of Bedouin tribes in the Middle East. In terms of Bedouin tribes of the Syrian Desert, colonial and independent governments have sponsored infrastructural and agricultural development projects that involved road-building and land privatization for commercial agriculture, which encroached upon tribal grazing lands and drastically altered nomadic pastoral cycle of Bedouin tribes. Such developments, in turn, facilitated the mechanization of transport and the peasantization, and proletarianization of the Bedouin economy.

So, the question becomes: why hasn't stratification recently emerged among the Bedouin? First, I argue that French colonial policy toward Bedouin tribes did not entail excessive belligerence. Further, Lebanon is a relatively weak state and the Lebanese Civil War left a political vacuum in the country, allowing tribes considerable autonomy over their lives. Second, I propose that cultural ideologies of work-honor and the absence of hired Lebanese Bedouin labor within society may have prevented the development of class stratification. Class divisions between herd owners and hired shepherds are lacking among Lebanese Bedouin of the Bekaa. However, such class or class-like divisions have been found among the Komachi (Bradburd 1990) and Qashqai' (Beck 1991) in southcentral Iran and southwest Iran, respectively as well as among the Lurs of Pish-e Kuh Luristan in west Iran (Black-Michaud 1986).

Not all Iranian pastoralists are inequalitarian. Irons (1994) points out that the social markings of class are lacking among Yomut Turkmen of northeast Iran. Similarly, Salzman (1999, 2000) finds that Baluch pastoralists of southeastern Iran are egalitarian decentralized, segmentary tribes. Salzman (1999) argues that tribes that are fully integrated into the lowest levels of state systems and who have no access to coercive resources with which to defend their interests are more centralized and less segmentary in their organization (pp. 39-40). Such pastoralists are referred to as “peasant pastoralists”. Peasant pastoralists lack an internal political structure, political leaders, or a sense of tribal unity (Salzman 1999: 40).

Are the Bedouin of the Bekaa best seen as peasant pastoralists? I believe the answer is no, not yet. Peasantization of the Bedouin is not complete. The Bedouin of the Bekaa are in a transitional phase in their pastoral history. Their economy *is* highly peasantized. However, Bedouin tribal sheikhly leaders still have important socio-political roles in their local communities. Bedouin sociopolitical structure and identity are still tribal. And perhaps most important, there is neither recognized ranking among tribes nor cultural devaluation of different tribes. A sense of solidarity within tribes is still found. Cultural emphasis on individualism among tribes is strong. While there is evidence of the beginnings of peasantization in the gender system of the Bedouin, at present, gender relations are largely egalitarian. In short, tribal egalitarianism is seen in expressions of Bedouin cultural identity, choice of marriage partners and in the mediation of social disputes.

While much attention in the pastoral literature has been paid to the changes in pastoral social structure, which have accompanied their greater encapsulation by colonial

and modern states and their greater incorporation into the world market, virtually nothing has been written on current social relations between pastoralists and sedentary peasants. My research indicates major changes in the social relations between a peasantized and proletarianized Bedouin population and Lebanese landowning peasants. While oral histories from the current study suggest that class-like relations between Bedouin and peasants emerged from the 1970s onward, future research is needed to better understand the historical nexus of Bedouin-peasant social relations through time.

In sum, central questions in the pastoral literature are: what is egalitarianism? ; how do egalitarian societies stay egalitarian?; and how and why do egalitarian societies become inegalitarian? To address such theoretical questions, detailed cross-cultural ethnographic and historical research, as well as quantitative data on wealth dynamics, are needed.

Middle Eastern Ethnology on Women

Middle Eastern ethnology on women has largely neglected Bedouin women. A notable exception is Abu-Lughod's (1986) study of Awlad Ali Bedouin women of Egypt. While the Bedouin of Egypt are more segregated than the Bekaa Bedouin, Abu-Lughod's account helped pave the way toward a more complex and sensitive treatment of the veil and seclusion, and honor and shame in Arabico-Muslim society. El Guindi (1999) has recently called for the need to go beyond text and local voices in the anthropology of Middle Eastern women and feminism in general. She calls for more rigorous theoretical conceptualization and cultural contextualization in the anthropological search for meaning. Middle Eastern women are less perceived from "a

gaze of violence, dominance, distortion and belittlement" (El Guindi 1999: 23; see also Nader 1989) in anthropology and history, and increasingly viewed in the richness of their political, social, religious and historical environments (e.g., Mernissi 1973, 1993; Zuhur 1992; El Guindi 1999).

Recent scholarship on Middle Eastern women has also begun to focus on women's role in the visible and invisible economy (MacLeod 1993; White 1994; Lobban 1998), helping to challenge essentialist notions of Middle Eastern women as 'peripheral to production' and 'confined to the home'.

Anthropological research among the Bedouin reinforces the importance of female labor in the local and regional economy. The gendered division of labor in Bedouin society indicates spousal complimentary and interdependency in productive activities. Bedouin women's productive activities do not create cultural conflicts with their reproductive roles. In fact, women's important contribution to household production may have contributed to early weaning and more rapid reproduction.

The multiple roles of women in Bedouin society are evident. Women who are infertile or subfertile are not culturally devalued, mistreated or divorced by their husbands. A common Bedouin proverb says that man whose wife is infertile must wait ten years before taking on another wife. Indeed, the woman in my sample who was infertile indicated that she and her husband waited ten years before she decided to start seriously looking for a co-wife for her husband.

The high status of Bedouin women in the Bekaa can also be seen in women's role as marriage negotiators and hostesses. Women's role in welcoming, entertaining and bestowing hospitality on guests is pivotal in cementing tribal bonds of friendship and

trust. Women as hostesses are key representatives of lineage pride, strength, and identity. The absence of a sexual double standard in Bedouin society further reinforces the high status of women.

Changes in gender relations are discernable in Bedouin society. Ethnographic research and oral histories show that greater seclusion and vigilance of female children among sheikhly families may be evident in the future. However, the Bekaa today is characterized by high female adolescent contributions to agricultural (and some forms of manufacturing) wage labor. Unmarried adolescent Bedouin women tend to work alongside kin. Such work arrangements help circumvent cultural concerns over female honor and chastity.

Because the oldest Bedouin village was also the most peasantized and gender egalitarian of Bedouin villages in the Bekaa, it is possible to speculate that increased peasantization of Bedouin tribes may lead to more patriarchal gender relations in the future. However, the historical development of this oldest village is unusual in that there were no other Bedouin villages at the time it was founded. Bedouin villages today are developing in a different socio-cultural environment—one that includes a wider network of Bedouin communication or information communities. The future social trajectories of other villages may thus lead to the development of social relations (including gender relations) that bear little similarity to social experiences of this oldest village community, but rather reflect their own local histories.

FIGURES



Figure 2.1: Map of Lebanon



Figure 2.2: Map of the Syrian Desert and Bordering Countries

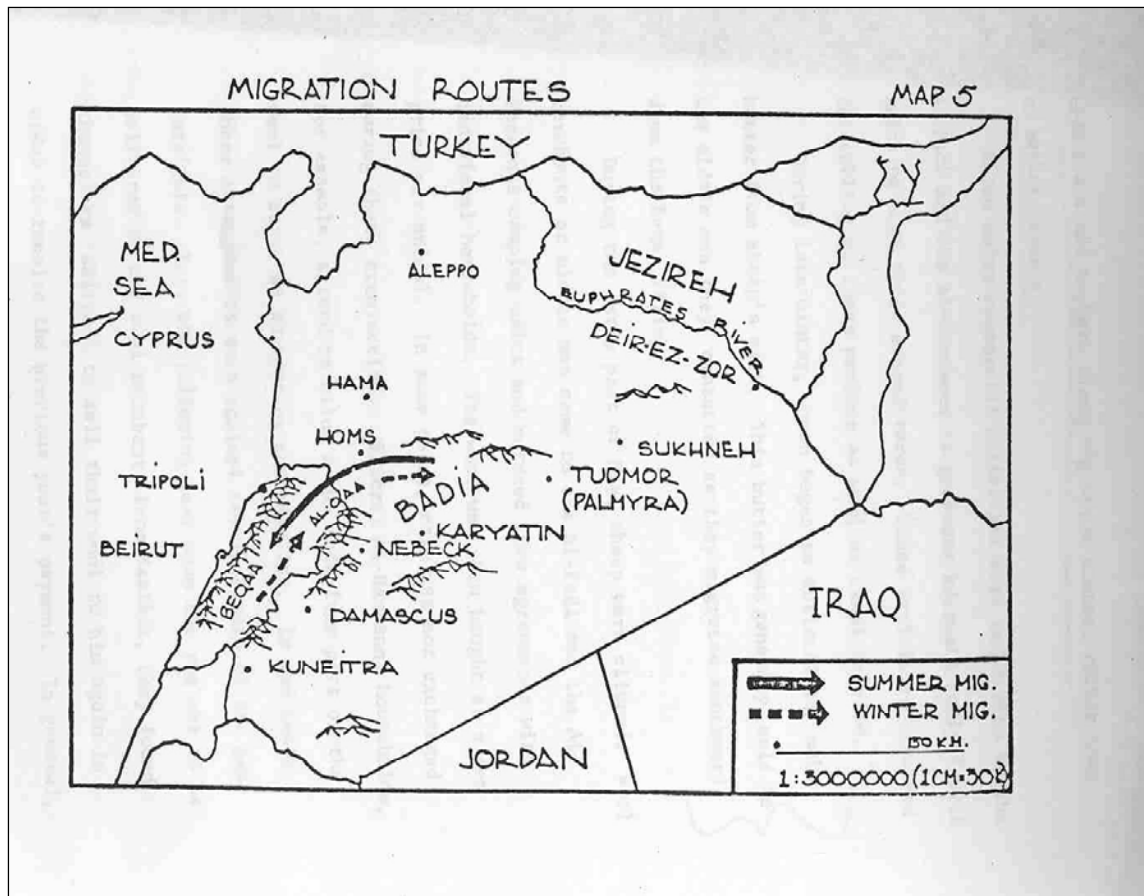


Figure 2.3: Map of Traditional Migration Routes: *Source: Chatty (1974)*

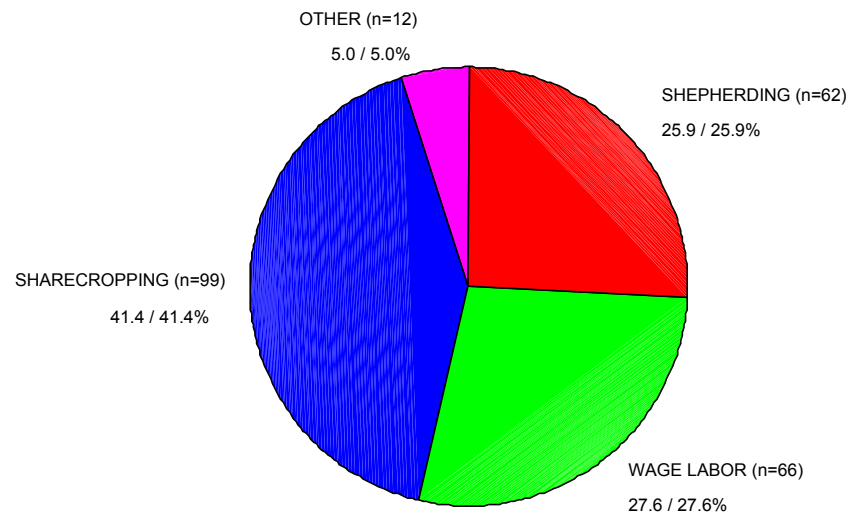


Figure 3.1: Bedouin Household Forms of Production

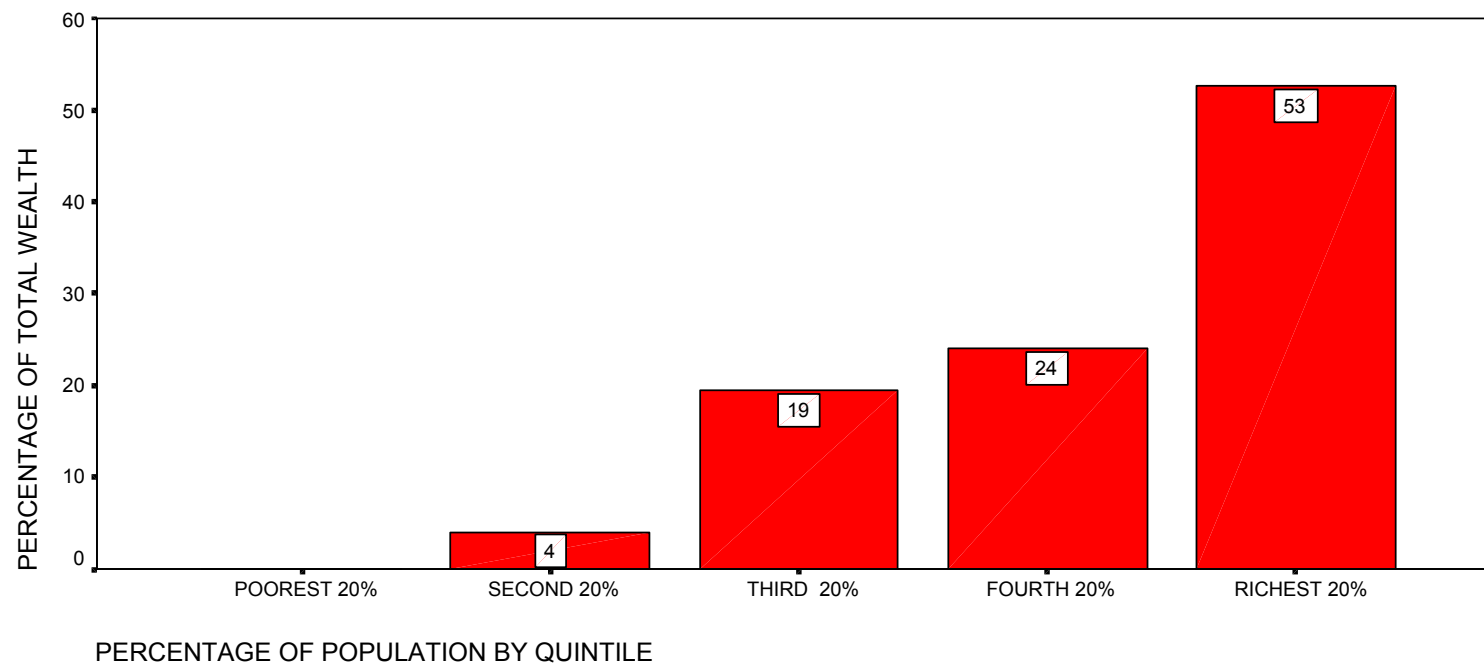


Figure 3.2: Wealth Distribution by Population Quintile among Bedouin Households of the Bekaa



Figure 4.1: Bedouin Man Rolling A Cigarette and Enjoying Some Tea. He is Seated on Floor Mattresses (*Faresh*) and Wearing Traditional Long Dress (*Thoub*) and White Head Scarf Held in Place by Double Braided Headband



Figure 4.2: Bedouin Tribal Chief (*Sheikh*) Serving Coffee



Figure 4.3: Bedouin Woman Wearing Traditional Black Headdress and Long Dress (*Thoub*)

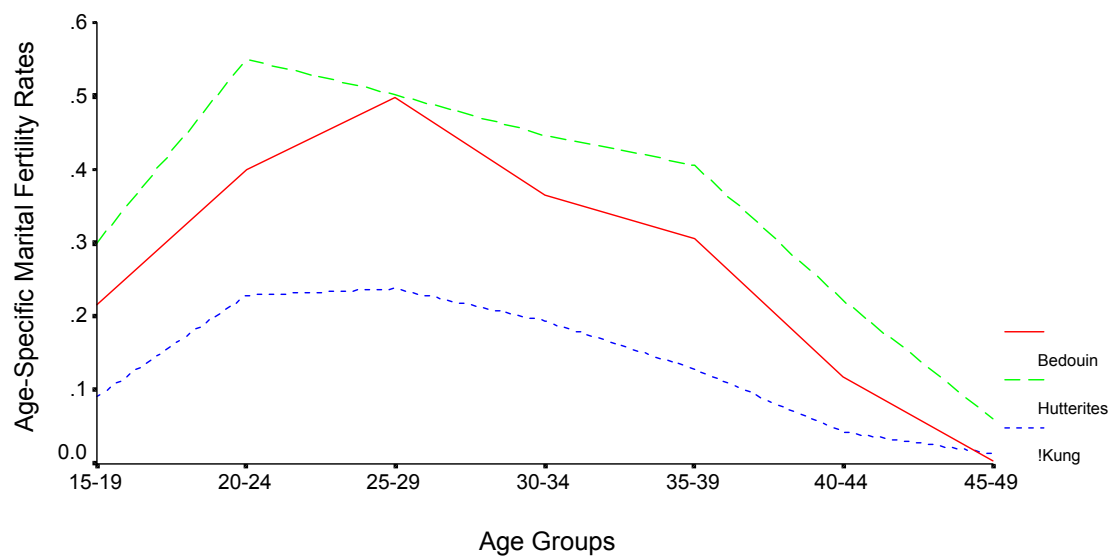


Figure 5.1: Age-specific Marital Fertility Rates for Three Natural Fertility Populations: Unadjusted Rates

Age-specific Marital Fertility Rates*

	Bedouin	Hutterites	!Kung
15-19	.217	.300	.091
20-24	.400	.550	.229
25-29	.498	.502	.238
30-34	.366	.447	.194
35-39	.307	.406	.129
40-44	.119	.222	.043
45-49	.005	.061	.014
TMFRs	9.56	12.44	4.69

*Source for nonBedouin groups: Hutterites: Coale (1965);
!Kung: Howell (2000)

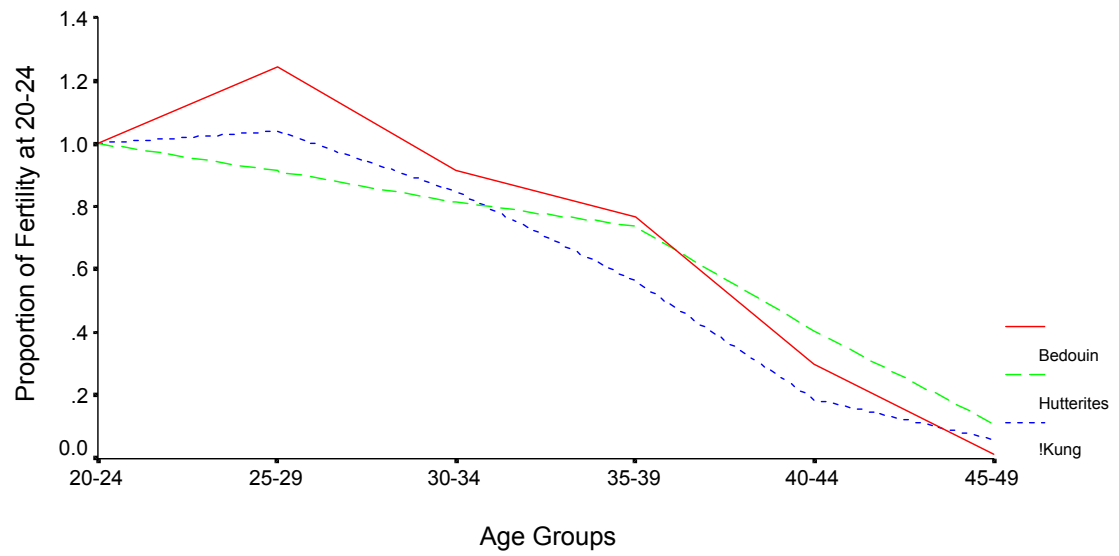


Figure 5.2: Age-specific Marital Fertility Rates for Three Natural Fertility Populations: Adjusted Rates

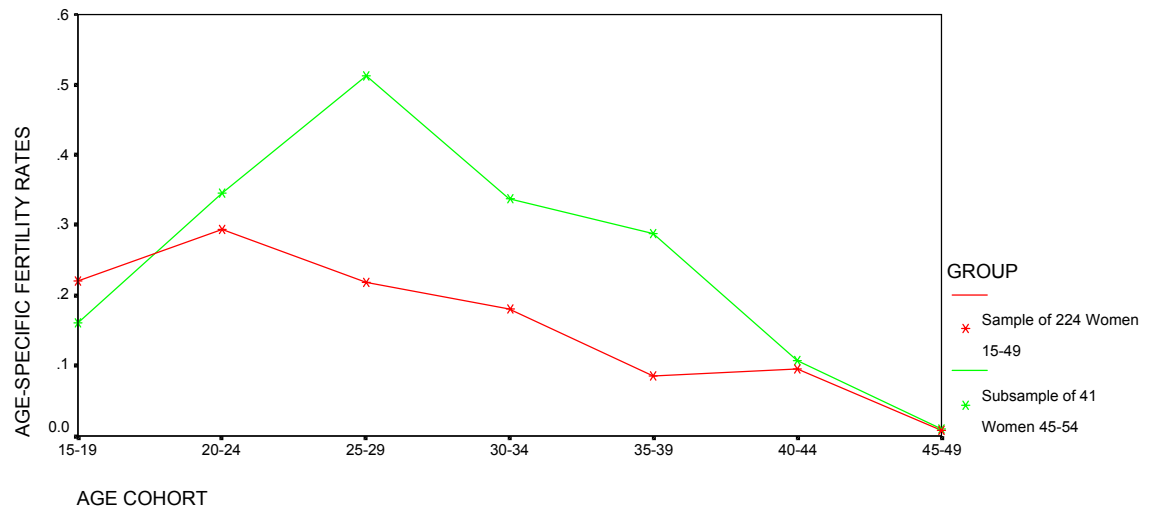


Figure 5.3 Age-specific Fertility Rates: Comparison of Sample of 224 Women Ages 15-49 and Subsample of 41 Women Ages 45-54: Unadjusted Rates

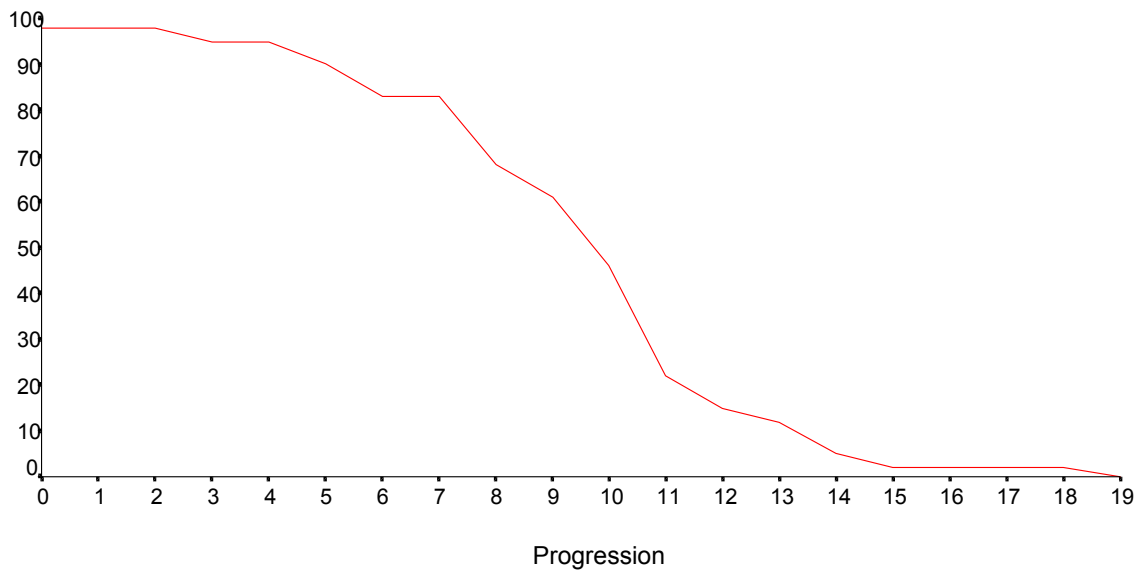


Figure 5.4: Parity Progression Ratios of the Bedouin

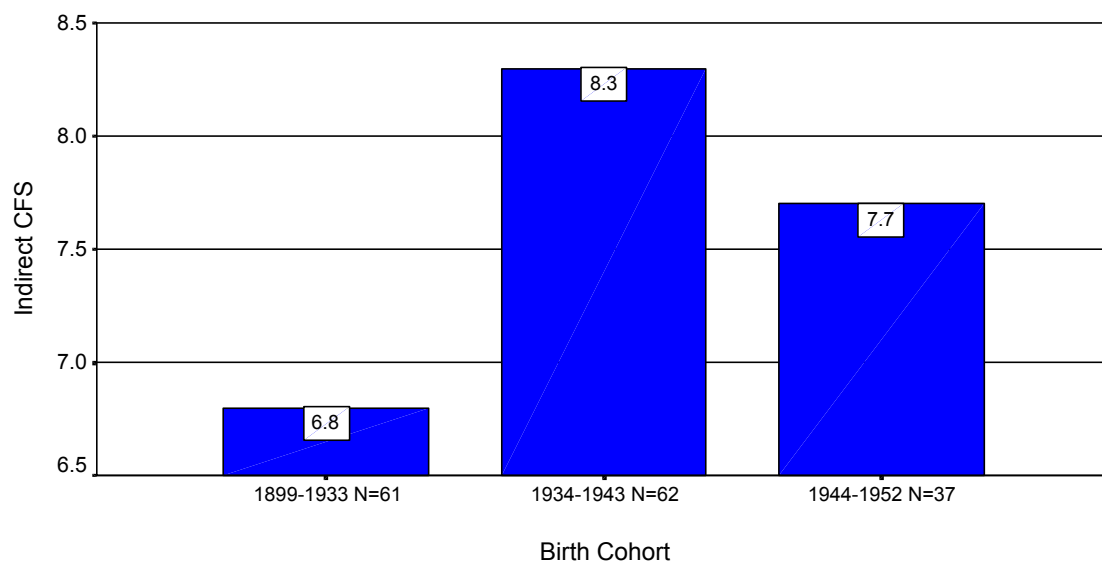


Figure 6.1: Indirect Estimates of Completed Family Size among Mothers of 160 Older Informants in 2000

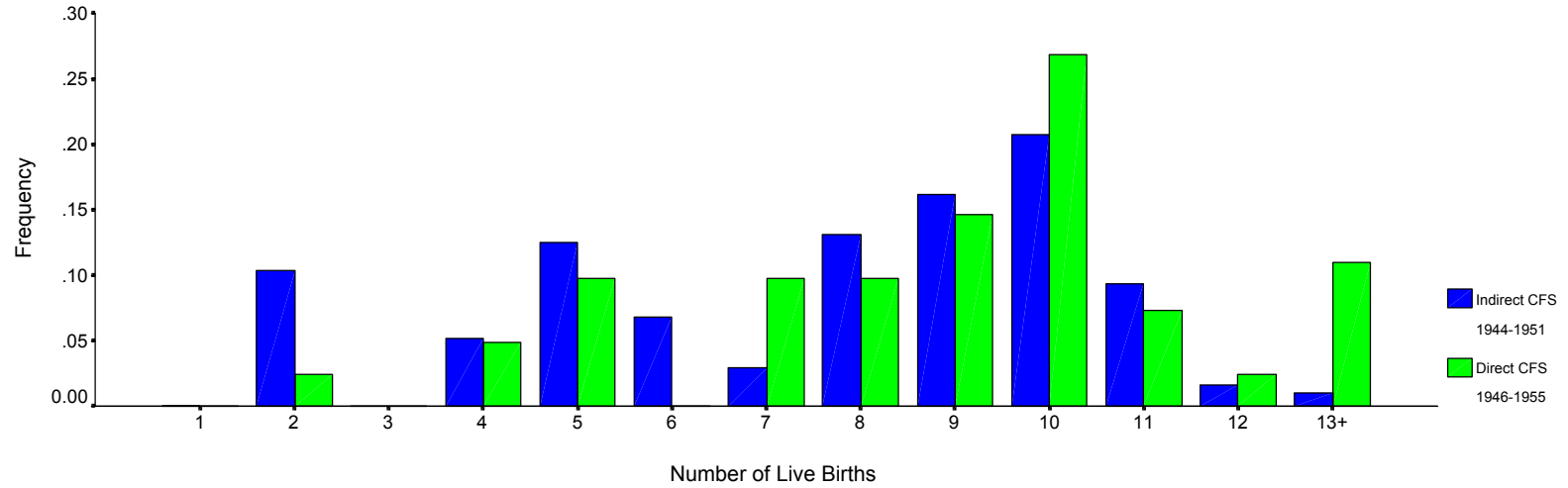


Figure 6.2: A Comparison of Direct and Indirect Family Size Distributions among Similar Birth Cohorts of Bedouin Women

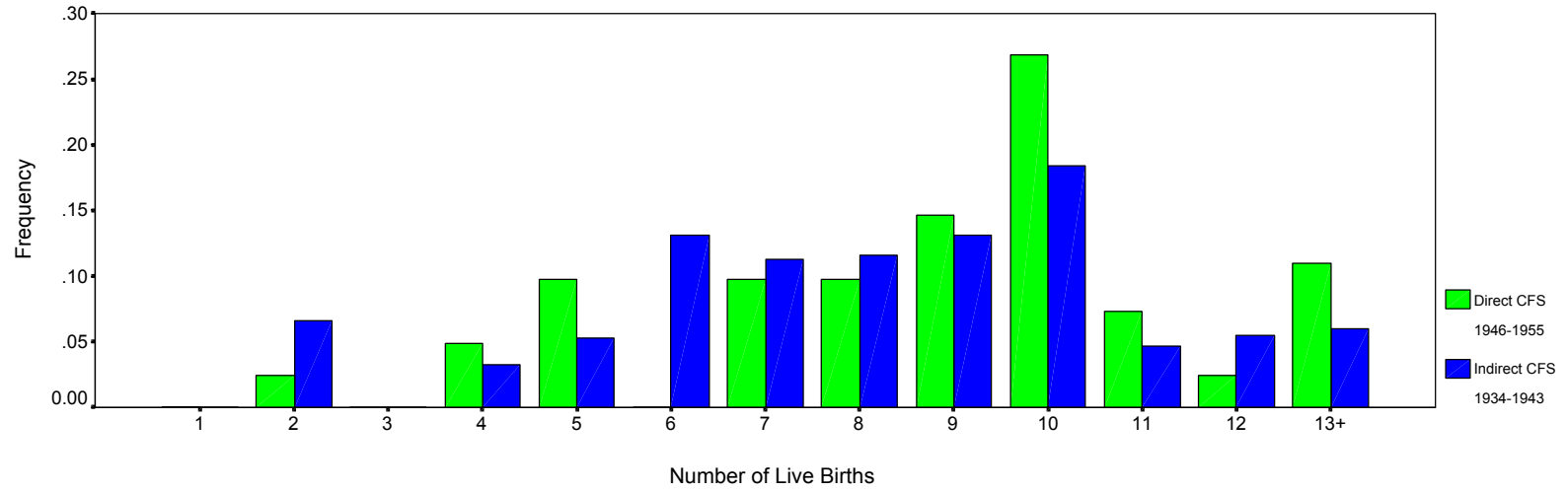


Figure 6.3: A Comparison of Direct and Indirect Family Size Distributions among Different Birth Cohorts of Bedouin Women

TABLES

Table 3.1: Juridical Ownership of the Means of Production in Sharecropping*

Ownership of the Means of Production	Landlord	Tenant	Shared	Rented
Land	X			
Water	X			X
Machinery				X
Seedlings			X	
Insecticide & Pesticide			X	
Labor		X		

Source: Pollock (1989)

Table 3.2: Household Animal and Land Ownership in the Sample

ANIMALS/LAND	YES		NO	
	No.	%	No.	%
SHEEP & GOATS	103	43.1	136	56.9
LAND	69	28.9	170	71.1

Table 3.3: The Size of Household Herd of Sheep and Goats in the Sample

NUMBER OF SHEEP & GOATS	No.	%	% of Total Herd
1-9	15	14.6	.4
10-49	19	18.4	3.0
50-99	14	13.6	5.6
100-149	11	10.7	8.2
150-199	13	12.6	13.0
200-249	10	9.7	13.1
250-299	7	6.8	11.8
300-349	5	4.9	9.7
350-399	1	1	2.3
400-449	2	1.9	5.2
500+	6	5.8	27.7
TOTAL	103	100.0	100.0

Table 3.4: The Size of Landholdings among Households that Own Land

SIZE OF LAND (DUNUM*)	No.	%
<1	12	17.4
1-9	40	58.0
10-29	9	13.0
30-49	2	2.9
50+	6	8.7
TOTAL	69	100.0

* A Dunum equals ¼ acre

Table 3.5: Household Index of Wealth in the Sample

WEALTH INDEX	No.	%	% of total wealth
0	44	18.4	0
1-500	16	6.7	.2
501-2000	14	5.9	1.0
2001-5000	20	12.6	2.7
5001-9000	41	17.2	16.8
9001-13000	49	20.5	22.7
13001-17000	20	8.4	14.2
17001-21,000	17	7.1	15.1
21001-25,000	7	2.9	7.3
25,001-29,000	3	1.3	3.7
29,001+	8	3.3	16.3
TOTAL	239	100.0	100.0

Table 3.6: Gini Coefficients from Various Communities

COMMUNITY	GINI COEFFICIENT
Sarakantsani, Macedonia	.22
Chiapas, Mexico	.32
Torbel, Switzerland	.343-.495
Bedouin of the Bekaa Valley, Lebanon	.523
Cucurpe of NW Mexico	.687

*Source for nonBedouin groups: (Sheridan 1988)

Table 3.7: Wealth Differences among Forms of Production

FORM OF PRODUCTION	Mean Wealth	% of Total Wealth
Pastoralism/Shepherding	17329±12906	49.9
Sharecropping	7743±5968	35.6
Wage Labor	3120±5293	9.6
Other	8808±6173	4.9
TOTAL	9007±9751	100.0

One-way ANOVA: $p < .001$ (Eta Squared= 29.8)

Table 3.8: Post Hoc Bonferroni Tests of Forms of Production**Multiple Comparisons**

Dependent Variable: WEALTHI3

Bonferroni

Form of Production	Form of Production	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1(Shepherds)	2	14024.01*	1477.06	.000	10461.20	17586.81
	3	9380.74*	1346.45	.000	6132.98	12628.50
2 (Sharecroppers)	1	-14024.01*	1477.06	.000	-17586.81	-10461.20
	3	-4643.27*	1333.73	.002	-7860.35	-1426.19
3 (Wage Labourers)	1	-9380.74*	1346.45	.000	-12628.50	-6132.98
	2	4643.27*	1333.73	.002	1426.19	7860.35

Based on observed means.

*. The mean difference is significant at the .05 level.

Table 5.1: Children Ever Born by Age of Mother, Age-Specific Fertility Rates and the Total Fertility Rate of 224 Ever Married Women Ages 15-49

Mother's Age (years)	Mean Children Ever Born	Children Ever Born	No. of Women	Age-Specific Fertility
15-19	1.100	11	10	.220
20-24	1.469	47	32	.294
25-29	1.093	47	43	.219
30-34	.906	48	53	.181
35-39	.432	16	37	.086
40-44	.478	11	23	.096
45-49	.038	1	26	.008
Total	5.516	181	224	1.104

Total Fertility Rate (TFR) 5.52^a

^a The total fertility rate of 5.52 is computed by summing the age-specific fertility rates for the 5-year intervals and multiplying by five.

Table 5.2: Age-specific Fertility Rates, Total Fertility Rate and Parity for 42 Bedouin Women Ages 45 Years and Older

Mother's Age at Birth	Parity																		Total	At Risk ¹	Age- Specific Fertility	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				18
15-19	0		2		0	0		0	2	6	11	3	0	3	3				3	33	210	.157
20-24	0		0		5	1		5	5	11	22	9	2	7	2				3	72	210	.343
25-29	0		0		2	11		8	12	14	26	10	2	9	4				4	102	210	.486
30-34	0		0		1	5		9	6	15	22	3	2	7	3				2	75	210	.357
35-39	0		0		0	3		4	7	5	22	6	4	7	1				4	63	210	.300
40-44	0		0		0	0		2	0	2	7	2	2	6	1				2	24	210	.114
45-49	0		0		0	0		0	0	1	0	0	0	0	0				0	1	210	.005
No. of children	0	0	2	0	8	20	0	28	32	54	110	33	12	39	14	0	0	0	18	370		1.762 ²
No. of mothers	1	0	1	0	2	4	0	4	4	6	11	3	1	3	1	0	0	0	1	42		
Mean parity and TFR																				8.81		

¹ The number of person-years at risk of birth during each interval is 42 women x 5 years.

² The total fertility rate of 8.81 is computed by summing the age-specific fertility rates for the 5-year intervals and multiplying by five.

**Table 5.3: Children Ever Born among
65 Bedouin Women Ages 40 Years and Older**

Mean	8.88 ± 3.14
Mode	10.0
Range	1-18

**Table 5.4: Mean, Median, Mode and Variance in the Mean
Children Ever Born among Women Ages 40 Years and Older,
According to Age Cohorts**

AGE COHORT	No.	Mean	Median	Mode	Variance
40-44	23	9.0000	9.0000	10	8.273
45-49	26	8.0769	9.0000	10	13.194
50-54	16	10.000	10.0000	10	5.467
Total	65	8.8769	9.0000	10	9.860

**Table 5.5: Mean and Median Age at First Marriage by Women's Age
in the Sample**

AGE COHORT	No.	Mean Age at Marriage	Median Age at Marriage
15-19	10	16.4	17
20-24	32	17.3	17
25-29	43	18.3	18
30-34	53	18.5	17
35-39	37	18.9	18
40-44	23	19.9	19
45-49	26	18.1	18
50-54	15	18.9	19
Sample Total	239	18.4	18

Table 5.6: Inter-Group Comparisons of the Proximate Determinants of Natural Fertility**Median age in yrs of women at:*

Population	TFR	Menarche	Marriage	First birth	Last birth	Menopause	Primary sterility rate	Median inter-birth interval (Mos.)	Median duration of lactational infecundability (Mos.)
Ganj	4.3	20.9	21.2	25.7	(40.0)	46.2	.011	36.5	20.4
!Kung	4.6	17.1	17.4	20.9	37.0	?	.135	35.1	(18.0)
Matlab	6.1	15.9	17.3	?	38.8	(44+)	?	33.3	17.3
Bedouin	8.8	(14.0)	18.0	19.5	39.0	(46+)	.015	25.0	(9.6)
Hutterites	9.8	(12-13)	22.0	(23.5)	39.0	?	.024	19.6	(6.0)

*Source for non-Bedouin groups: Wood (1988). Figures in parentheses are indirect estimates and are of dubious reliability

Table 5.7: The Proximate Determinants of Fertility*

I. Exposure Factors

1. Age at marriage or entry into sexual union
2. Age at menarche
3. Age at menopause
4. Age at the onset of pathological sterility (if earlier than menopause)

II. Susceptibility factors

5. Duration of lactational infecundability
 6. Duration of fecund waiting time to conception (determined by the following fecundability factors) :
 - a. frequency of insemination
 - b. length of ovarian cycles
 - c. proportion of cycles ovulatory
 - d. duration of the fertile period, given ovulation^a
 - e. probability of conception from a single insemination in the fertile period
 7. Probability of fetal loss^b
 8. Length of nonsusceptible period associated with each fetal loss^c
 9. Length of gestation resulting in live birth
-

^a The fertile period is the mid-portion of the cycle when insemination has some nonzero probability of resulting in conception.

^b Fetal loss refers to all spontaneous abortions and thus includes both miscarriages and stillbirths.

^c The nonsusceptible period associated with a fetal loss includes the truncated gestation ending in loss, plus any residual period of infecundability following the loss

*Source: Wood (1994)

**Table 5.8: The Intra-uterine Mortality Rate
among 65 Bedouin Women Ages 40 Years and Older**

No. of stillbirths and miscarriages	101
No. of pregnancies	663
% intra-uterine mortality	15.2%

Table 5.9: Children Ever Born, Living Children, Dead Children and Proportion Dead by Age Cohort of Mother

AGE COHORT	EVER BORN No.	LIVING No.	DEAD No.	PROPORTION DEAD
15-19	11	10	1	.09
20-24	94	89	5	.05
25-29	155	148	7	.05
30-34	296	284	12	.04
35-39	265	241	24	.09
40-44	207	196	11	.05
45-49	211	192	19	.09
50-54	147	133	14	.10
Sample Total	1386	1292	93	.07

Table 5.10: Mortality Measures on Ever Born Children of 240 Bedouin Women

Exact age ^a	Started interval	Currently in interval	Completed interval	Deaths	q_x	l_x	d_x
0	1,399	76	1,323	70	.053	100,000	5,300
1	1,253	208	1,045	17	.016	94,700	1,515
5	1,028	319	709	3	.004	93,185	373
10	706	278	428	1	.002	92,812	186
15	427	208	219	2	.009	92,626	834
20	217	178	39	1	.026	91,792	2,387
30+	38	38	0	0	—	89,405	

^a The length of each interval is determined by the difference between age x and $x+1$, hence the first interval is 1 year in length; the second interval is 4-years long; 3-5 are 5-years long; the sixth interval is 10-years long; and the final interval is open-ended.

Table 5.11: Infant and Child Mortality in Traditional Societies

Region	Population	Subsistence	190	491
Africa				
Mali	Fulani (Seno-Mango)	agro-pastoralism	.15	.20
Mali	Fulani (Delta)	agro-pastoralism	.22	.36
Botswana	!Kung	foraging	.22	.22
Botswana	!Kung	foraging	.18	.06
Gambia	Mandika & Jola (Keneba)	horticulture	.24	.34
Gambia	Mandika & Jola (Manduar)	horticulture	.13	.23
Mali	Bambara	agriculture	.20	.22
Mali	Tamasheq (Delta)	pastoralism	.13	.19
Mali	Tamasheq (Gourman)	pastoralism	.15	.20
Tanzania	Datoga	pastoralism	.21	.10
Kenya	Kipsigis (1945-90)	pastoralism	.09	.06
Kenya	Kipsigis (1918-53)	pastoralism	.08	.11
Botswana	Herero (1975-86)	pastoralism	.06	.03
Botswana	Herero (1960-74)	pastoralism	.12	.06
Botswana	Herero (before 1959)	pastoralism	.13	.09
Asia				
Nepal	Nyinba	agriculture	.22	.14
Nepal	Tamang	agro-pastoralism	.20	.08
Malaysia	Semai Senoi	horticulture	.22	.12
N. America				
Yukon	Kutchin	foraging	.17	.12
Yukon	Kutchin	foraging	.09	.07
S. America				
Brazil	Yanomama (Mucajai)	horticulture	.14	.09
Middle East				
Bedouin	Bekaa Valley, Lebanon	agro-pastoralism	.05	.02

* Source for non-Bedouin groups: Pennington (1996)

Table 5.12: Mean Number of Live Births and Survivors by Form of Production

Form of Production	No.	Mean Live Births	Mean Survivors
Pastoralism/Shepherding	63	6.7± 4.02	6.2± 3.6
Sharecropping	99	5.8± 3.0	5.4± 2.9
Wage labor	65	4.9± 3.3	3.6± 3.1
Sample Total	227	5.8± 3.4	5.4± 3.2

Table 5.13: Mean Age of Women by Household Forms of Production in the Sample

Form of Production	No.	Mean Age
Pastoralism/Shepherding	63	37.8± 9.5
Sharecropping	99	33.3± 8.8
Wage labor	65	30.8±8.2
Sample Total	227	33.8± 9.2

Table 5.14: Summary of Effects of Forms of Production and Marriage Duration on the Number of Live Births and Survivors among 227 Women Ages 15-54 in 2000, Poisson Loglinear Regression

	<i>df</i>	Live Births		Survivors	
		χ^2_{LR}	<i>p</i>	χ^2_{LR}	<i>p</i>
Form of production	2	1.23	.5412	1.14	.5660
Marriage Duration	1	247.31	<.0001	213.29	<.0001

Table 6.1: Summary of Statistical Association Between Wealth and Parity by Age Cohort (Controls: Family Type and Marriage Duration), Poisson Loglinear Regression

Age Cohort	N	χ^2_{LR}	<i>p</i>
15-19	10	1.87	.1714
20-24	32	1.60	.2060
25-29	43	2.23	.1352
30-34	53	7.85	.0051
35-39	37	11.71	.0006
40-44	23	12.81	.0003
45-49	26	0.19	.6614
50-54	16	.	.
Sample Total	240	6.13	.0133

Table 6.2: The Mean and Variance in the Cumulative Number of Live Children Ever-Born among Five Natural Fertility Populations*, Classified by Age

Fertility Populations , Classified by Age																		
Bedouin				!Kung			Ganj			Delta Fulbe			Ache					
Age (Years)																		
	No.	Mean	Variance	No.	Mean	Variance	No.	Mean	Variance	No.	Mean	Variance	No.	Mean	Variance			
15-19	10	1.10	1.66				29	0										
20-24	32	2.94	3.54				50	.26	.28							42	2.0	1.44
25-29	43	3.60	3.25				31	1.13	1.18							37	3.8	3.24
30-34	53	5.57	6.83				58	3.07	2.70							25	6.0	4.84
35-39	37	7.16	5.36				23	4.22	4.72							12	6.5	6.76
40-44	23	9.00	8.27				29	4.66	5.82							6	5.5	7.84
45-49	26	8.08	13.19	15	4.1	6.64	14	4.71	2.53				42	7.67	5.50			
50-54	16	10.00	5.47	12	4.2	4.15	8	3.87	2.70									
55-59				9	5.0	4.00	17	4.00	2.75									
60+				26	5.15	5.66	23	3.57	2.98									

*Sources for non-Bedouin data: !Kung: Howell (2000); Ganj: Wood Johnson and Campbell (1985); Fulbe: Marriott (1996); Ache: Hill and Hurtado (1996)

Table 6.3: The Mean and Variance in the Number of Children Ever Born Obtained from Retrospective Estimates of Age-Specific Fertility among 42 Women Ages 45 Years and Older in 2000
Bedouin

Age (Years)	No.	Mean	Variance
15-19	42	.786	1.20
20-24	42	1.71	1.67
25-29	42	2.43	1.28
30-34	42	1.79	1.00
35-39	42	1.5	1.67
40-44	42	.571	.592
45-49	42	2.38 E-02	2.38 E-02

Table 6.4: Mean and Variance in the Number of Children Ever Born for 14 English Parishes*
14 English Parishes

Age (Years)	Mean of 14	Variance
15-19	378	13,225
20-24	387	576
25-29	349	400
30-34	305	256
35-39	245	169
40-44	132	289
45-49	27	81

*Source: Wilson (1984)

Table 6.5: Age-Specific Percentages of Sterility in Married Women*

	Age groups				
	20-24	25-29	30-34	35-39	40-44
Natural Fertility Populations					
Bedouin women 45 and over in 2000	5	5	7	17	55
Five European populations	3	6	10	16	31
Rural Japan	4	10	19	33	53
!Kung women 45 and over in 1968	18	38	50	53	83

*Source for non-Bedouin groups: Howell (2000)

Table 6.6: Summary of Effects of Age at Onset of Sterility on Parity among 42 Ever Married Bedouin Women Ages 45 Years and Older in 2000, Poisson Loglinear Regression

	df	χ^2_{LR}	p
Age at Onset of Sterility	1	29.16	<.0001
Age at Marriage	1	3.88	.0489

**APPENDIX A: SEMI-STRUCTURED QUESTIONNAIRE (ENGLISH
TRANSLATION OF REPRODUCTIVE HISTORIES, WORK HISTORIES AND
STRUCTURED QUESTIONS)**

Date ____/____/____.

1) Participant ID # ____.

2) Name of interviewer ____.

3) Name of participant ____.

4) What was the date and place of your birth? ____ (month); 19__ (year). Nationality: ____.

5) What age were you on your last birthday?

CHECK - Do date of birth and age match? YES1 NO 2? check using event calendar

6) Nearest village ____.

7) Tribe (qabila). Woman's natal tribe ____ spouse's tribe ____.
Woman's natal ashira ____ spouse's ashira ____.

8) Family (beit) Woman's natal family ____ spouse's family ____.

9) Current residence: Stone house/Tent (If other, specify). If stone house, do you OWN/RENT it? How many rooms ____? How long have you been living in a stone house? ____ yrs.

10) Do you have any other homes in addition to current one? YES1 NO 2. If YES, number of stone house(s) ____ and number of rooms ____; own/rent ____ . Location ____ . No. of tent(s) ____ . Location ____ .

11) Do you or your husband own livestock? Specify the no. of sheep, goats, cows and chickens owned at present. If NO, go to 13.

12) Who tends to your livestock? (Specify male head, male children, female children, wife hired shepherd or other. If hired shepherds, specify number of individuals and relationship to herd owner).

13) Does your spouse herd sheep/goats for someone else? If YES, are they relatives of yours? Specify.

14) On what do livestock subsist (Specify natural graze, feedstuffs or both)? If natural graze, where do you graze sheep and goats and which months? Where is the best grazing area?

15) Did you or someone in your family migrate with flocks last year? If YES, where did you migrate and how many times did you migrate last year? Specify.

16) Did you/your spouse inherit livestock at death (whose death)? Did your spouse inherit anything at marriage?

17) Was your marriage an exchange marriage (*moukayada* or *badeeli*)? Specify.

18) Did you receive an indirect dowry? What did it consist of? Specify. Was the indirect dowry paid all at once or on several occasions? Did your family retain any portion of it for themselves?

19) Did you receive a direct dowry? What did it consist of?

20) Do you/your spouse own land? YES1 NO 2. If NO go to 22

21) How many dunums of land do you own?

22) Does your spouse work as a sharecropper or tenant farmer? Y/N. For how many months of the year? _____. Describe any contracts with peasant farmers in detail. Do contracts allow you to graze sheep on farmer's land at no additional cost to you? What do you do to make money during the rest of the year?

23) Do you own a truck? YES/NO. If NO, go to 25.

24) Do you share the truck with other relatives? If so, whom?

25) Do you own other forms of transportation (i.e., motorcycles, cars, etc)? Specify.

26) Do you have a television (Y/N), radio (Y/N), refrigerator (Y/N), a telephone (Y/N), walkie talkie (Y/N)?

27) What is (or was if widowed) your spouse's primary occupation? _____. Please describe your productive activities as a household unit. What occupations have you, your husband and household members been involved *since marriage*? Specify length of time in each occupation.

28) Are there class differences within Bedouin society? Explain. Would you allow your daughter or son to marry someone from a different tribe or a Fellah?

29) Do different tribes have different occupational specializations? Explain.

30) What is your father's primary occupation?

31) Current Marital Status: Married/Widowed/Divorced.

32) Who chose your first husband?_____.

33) Do you have any co-wives? If so, no.____ and your status (i.e., 1st, 2nd, 3rd wife?)
____. Where do they live? List their number of live births.

34) No. of marriages ever had_____.

35) Age at first marriage_____.

CHECK – age at first marriage using event calendar

36) Are you related to your husband? YES/NO. Specify *ibn 'amm* or other.

37) First marriage result- still married/divorced/widowed

38) Have you ever attended school? YES/NO. If yes, specify how many years, where and what type of school.

39) Results of marriages: -FILL OUT ONLY IF MARRIED MORE THAN ONCE-

a=still married

b=widowed

c=divorced

	Length of marriage	Related to spouse	Age at marriage	Date of marriage	Indirect dowry
1					
2					
3					
4					

40) Have you ever been pregnant? If NO, go to 87

41) Who do you consult for advice during your pregnancy?

42) Have you given birth? YES 1 NO 2. If YES, go to 43. If NO, have you experienced miscarriage? If YES, how many? _____ and how many months pregnant were you? _____.

43) Number of children: boys alive____; girls alive____; boys deceased____; girls deceased____. Apart from these have you ever experienced miscarriages? No. of miscarriages B____ G____. After how many months (specify for each child)? _____. No. of stillbirths B____ G_____.

44) Current Status

Are you currently pregnant? YES 1 NO 2. If YES, how many months? _____.

Are you menopausal? YES1 NO 2. How many years/months of irregular periods or no periods?_____.

Are you currently breastfeeding? YES1 NO 2. How many months?_____.

Are you currently using any contraception? YES1 NO 2. Specify_____.

** In the following section I would like to discuss all the pregnancies and births you have experienced, beginning with the first (record twins on separate lines and ask for developmental markers to determine age at death).

	45. Did this pregnancy result in a live birth?	46. How many months was the pregnancy when you lost it?	47. How old were you at the time?	48. FILL IN Birth order	49. In what month and year was this baby born?	48. How old were you when the baby was born?	51. Is this child a boy or girl?	52. Is this child still alive? (If NO, age at death)	53. Child's age NOW	54. Inter pregnancy interval (months)	55. Inter birth interval (months)
1.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
2.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
3.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
4	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
5.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
6.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
7.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			
8.	YES 1 →48 NO 2	1 ____ months 2 stillborn	→ 45				Boy 1 Girl 2	YES 1 NO 2 Age: ____			

56. Calculate final open birth interval (time since last birth or since marriage): _____ months.

The following questions concern your last child born alive: B__ G__

57) Is he/she *still* alive? YES/NO. If YES, what age is he/she now? _____ If no go to 69.

58.) How is he/she currently fed? 1. breastmilk only 2. breastmilk and other milk 3. breastmilk and other food 4. weaned. If 1 got to 59; If 2, 3 or 4 go to 63.

59) If 1: How many times during the day do you breastfeed your infant _____?.

60) How many times in the night does the infant wake you to breastfeed _____?

61) Does your infant currently sleep with you and always stay with you during the day?

62) Give details of other child caretakers/reasons for leaving this infant

63) If 2/3/4 for how long did you breastfeed your last infant before introducing any other milk or food?

64) What supplemental foods did you give your infant while breastfeeding? Specify.

65) At what age did you completely wean your infant?

66) With what foods?

67) What made you decide?

68) How soon after giving birth to your last child born alive did you get your period?

If last child dead: (IF LAST CHILD ALIVE GO TO 72)

69) How long ago did your infant pass away? What age was he/she?

70) How was this infant being fed at the time of death?

71) What do you think the cause of death was? List symptoms
Was any medicine administered?

72) Would you like to delay your next pregnancy for a year or more? If YES1 NO 2, why?

73) After childbirth, do you practice sexual abstinence? If so, how long?

74) Where did you give birth (e.g., your home, relative's home, clinic, etc.)?

75) Who helped you during childbirth?

76) What did your helper do for you?

77) For last child still alive and last child dead: Who cut the umbilical cord? With what was the cord cut? Was the cord covered/sealed with anything? Last Child Alive: _____; _____; _____. Last Child Dead: _____; _____; _____.

78) What was the first food given to your baby?

79) Have you ever been pregnant whilst still breastfeeding one of your infants? If YES, what did you do? 1. immediately wean the infant 2. carried on breastfeeding 3. arranged for the infant to be breastfed by another woman. 4. other- specify.

80) How old was your husband when you got married? _____.

81) Are any of your children married? How many? Are any married to Fellahin?

82) How many of your children are currently in school? Which school do they attend?

83) Do you know which diseases can be prevented by vaccination?

1. Diphtheria 2. Tetanus 3. Small Pox 4. Measles 5. Tuberculosis

84) Where are all your children currently living? (If absent, why? for how long? where etc)

85) Do your married children or those who do not live with you, or any relatives send you money? If so, who, how often and how much?

86) Do you consider the number of children that you presently have to be sufficient or insufficient? Sufficient/Insufficient.

87) If you could choose the exact number of children that you could have, how many boys/girls would this number be? B__ G__.

88) Have you ever been visited by a state official or member of the government? If YES, when did the visit occur and what was the purpose of the visit?

89) I would like to ask you some questions about members of your beit, household:

Name	Relationship	Age at last birthday	Primary Occupation	Temp./perm. resident

90) Total number of inhabitants *currently* in your beit (tent or stone house)_____.

91) Do you know of any method of birthspacing (traditional or modern)? Have you ever used any of these methods? Specify.

92) Do you normally have your periods regularly every month? Y/N How about last month? Y/N

93) How old were you when you first menstruated? AGE:_____.

94) Water source: well/river/other _____. Sanitation facilities: latrine/river; lamp YES
1 NO 2; soap YES 1 NO 2.

95) Are you currently using any contraceptive? YES 1 NO 2. Specify.

96) Do you pray every day? YES/NO. Does your spouse pray every day? YES/NO.

97) Are your parents still alive? Please specify.

98) Is your mother postmenopausal at present or at the time of her death? If YES, when
was she born? _____. How many children ever born alive did she have?
_____.

99) Were there any constraints that affected the timing of your marriage? Specify

In this next section, I would like you to tell me whether you agree or disagree with
each of the following 10 statements about reproduction and production.

- 1) A childless woman is a useless woman AGREE/DISAGREE/DON'T KNOW
- 2) Pregnancy is preventable AGREE/DISAGREE/DON'T KNOW
- 3) Children are a source of wealth AGREE/DISAGREE/DON'T KNOW
- 4) Motherhood is a woman's most important role AGREE/DISAGREE/DON'T KNOW
- 5) A couple should not marry until the man has his own house
AGREE/DISAGREE/DON'T KNOW
- 6) Men should perform the bulk of hard physical labor AGREE/DISAGREE/DON'T
KNOW
- 7) Hard work is something to be proud of AGREE/DISAGREE/DON'T KNOW
- 8) Working for someone else is shameful AGREE/DISAGREE/DON'T KNOW
- 9) Men and women should not mingle in public AGREE/DISAGREE/DON'T KNOW
- 10) Large families are better than small ones AGREE/DISAGREE/DON'T KNOW
- 11) Children should work and help their parents AGREE/DISAGREE/DON'T KNOW
- 12) The husband-wife relationship is more important than the mother-child relationship
AGREE/DISAGREE/DON'T KNOW
- 13) Pregnancy is dangerous AGREE/DISAGREE/DON'T KNOW
- 14) Children should send or give their parents money AGREE/DISAGREE/DON'T
KNOW
- 15) Women are more religious than men AGREE/DISAGREE/DON'T KNOW

In this last section, I need to take a few anthropometric measurements, such as
weight, height, and some skin fold measurements.

Weight A) _____ B) _____ C) AVERAGE _____
Height A) _____ B) _____ C) AVERAGE _____
Triceps A) _____ B) _____ C) AVERAGE _____
Subscapular A) _____ B) _____ C) AVERAGE _____
Lateral Calf A) _____ B) _____ C) AVERAGE _____
Mid arm circumference A) _____ B) _____ C) AVERAGE _____
Mid calf circumference A) _____ B) _____ C) AVERAGE _____

APPENDIX B: INDICES OF TOTAL WEALTH IN THE BASIC MEANS OF PRODUCTION

In order to compile Indices of Total Wealth in the Basic Means of Production, I weighed the most important forms of wealth in the Bedouin's agro-pastoral economy—land, livestock, machinery—according to their approximate value in 2000 Lebanese pounds. I based this weighing upon the pricing given to me from multiple sources during the course of my fieldwork. In terms of the comparative accuracy of such weighing, land may be slightly undervalued in comparison to livestock and machinery. The value of land varies according to location, thus prices are rough approximations.

I collected some data on the prices of animals bought and sold by the Bedouin. Of course, prices vary by age, weight and sex of the animal, therefore, prices represent rough averages of prices per animal. While a few Bedouin own relatively new vehicles and farm machinery, most Bedouin purchase used ones. However, even used vehicles in Lebanon are expensive in comparison to U.S. prices. Again, the following figures are rough estimates of average value and the actual variation within any category is extensive.

ITEM	Average Cost (<i>Lebanese pounds</i>)	Weight in <i>Wealth Index</i>
Land	dunum=90,000	90
Sheep	50,000	50
Goat	35,000	35
Cow	100,000	100
Truck	9,000,000	9000
Tractor	9,500,000	9500
Car	2,000,000	2000
Motor	3,500,000	3500

Utilizing the above weighted values, Indices of Total Wealth in the Means of Production were calculated for all 240 households surveyed. The resulting indices, therefore, furnish a fairly accurate and systematic base for comparing household wealth among the Bedouin of the Bekaa.

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