Recent years have brought unprecedented changes to human life and its physical, social, and economic context. Given the increased interconnectedness of populations, people all over the world may be affected by events that take place in an area far away [1-3]. Technological and related changes in public health and medicine have resulted in interconnected and parallel changes—2 great demographic transitions.

First Demographic Transition: Population Growth
Two centuries ago the rise of modern science and technology dramatically reduced disease and famine in Europe and North America, in turn reducing mortality and triggering a sustained and unprecedented growth in population, followed by declines in fertility. This change in mortality, fertility, and population growth has been called “the first demographic transition.”

Second Demographic Transition: Post-industrial Era
The post-industrial age is marked by below-replacement fertility levels, aging populations, and decreasing population size. Current estimates suggest that demographic growth rates are declining nearly everywhere, even more rapidly than was earlier projected [4]. Regional growth rates differ, but international migration redistributes a considerable portion of the continuing natural increase [5]. This post-industrial stage of global demographic transition, “the second demographic transition” [6] is characterized by decreases in the total first marriage rate; large increases in mean age at marriage and childbearing; divorce and union dissolution; cohabitation; proportion of extramarital births; and maternal employment [7-11]. In addition, post-industrial societies have experienced large decreases in period and cohort fertility.

Changes in the Structure of Marriage and the Family
In industrialized countries, the structure of marriage and the family has been undergoing major change since the beginning of the 1970s [7]. Mean age at marriage and at childbearing have been increasing—by an average of 2 years in some places. The total divorce rate is near or above 30 per 100 marriages in most industrialized countries and spiked upward between 1980 and 1999 [7]. In Europe many women choose not to marry, and the average age at the time of first marriage is increasing; the marriage rate has decreased by 40 percent from 1960 to 1995 [12]. From 1981 to 1996 in urban centers in Europe, the size of the average household declined from 2.8 persons to 2.3 persons; the number of people living
alone increased from 27 percent to 38 percent; and the proportion of single-parent households increased from 6.5 percent to 7.5 percent [13]. Similar trends are observed in the United States; the percentage of adults aged 15 and older who were married declined from 69.3 percent and 65.9 percent for men and women, respectively, in 1960 to 57.1 percent and 54 percent in 2003 [14]. Conversely, over the same time period, the percentage of men and women aged 15 and older who were divorced increased from 1.8 percent and 2.6 percent in 1960 to 8.3 percent and 10.9 percent in 2003 among men and women, respectively [14]. Family households had predominated in the United States—81 percent of all households in 1970 were family households, but this proportion dropped to 68 percent by 2003 [15].

Changes in Values, Attitudes, and Expectations
The demographic shifts of the second demographic transition were accompanied by large-scale changes in values and attitudes. Emphasis on values such as individual autonomy, self-fulfillment, tolerance, democratic decision making, individual freedoms, and individual rights increased [16]. The roles and expectations of women changed: women are less likely to stay in abusive or unhappy marriages; they assume equal rights to education and work outside of the home, and they expect an enjoyable sex life with control over their fertility via “the pill” and other means [3].

Technology and Its Consequences
Cell phones and the Internet constitute important technological developments with significant effects on the ways in which people relate to each other. In the late 1980s and early 1990s cell phones revolutionized the social organization of sex work. The remarkable growth of cyber-brothels changed the way sexual services are provided, and chat rooms have supplied a powerful mechanism for sexually connecting men who have sex with men, in contracted time and space. The role of the Internet in sexual behavior is still evolving. An increasing number of people use the Internet to find dates and potential marriage partners, and an increasing number of people use it to identify one-time partners.

Changing Sexual Behaviors
Data collected between 1995 and 1997 in Chicago showed that, in the mid-1990s, Americans aged 18 to 59 spent 50 percent of their lives as singles, longer than ever before. They were in the “sex market” for longer periods and at older ages; cohabited on average for 4 years; were married an average of 18 years; and dated or searched for a partner an average of 19 years.

All the changes discussed above are revolutionizing the pattern of sexual unions, the sex structure of society, and sexual behaviors. In general people are living outside of traditional monogamous marriages for longer periods of their lives, have control over their fertility, and expect an enjoyable sex life. The net effect of these transformations on sexually transmitted infection epidemiology and sexual health will unfold in the coming decades.

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