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Sexual Behavior and Scholastic Success:  
Moral Codes and Behavioral Outcomes in Malawi

By

Margaret Taylor Frye

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Requirements for the degree of

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in

Sociology and Demography

in the

Graduate Division

of the

University of California, Berkeley

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Professor Ann Swidler, Co-Chair

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Professor Jane Mauldon

Spring 2013

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## Abstract

Sex and Scholastic Success: Moral Codes and Behavioral Outcomes in Malawi

By

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Doctor of Philosophy in Sociology and Demography

University of California, Berkeley

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Professor Ann Swidler, Co-Chair

Access to formal education has expanded across sub-Saharan Africa over the past 20 years, as a result of a global policy commitment to provide “Education for All.” In Malawi, an ambitious 1994 policy eliminated primary school fees, causing primary school enrollment to increase by over 60 percent in a single year. Yet these new opportunities to attend primary school have not been paired with similar expansions at higher levels, and in 2010, less than one percent of Malawian youth who entered school could expect to complete secondary school. In this context of expansive ideological horizons and narrow objective opportunities, this dissertation examines education as a cultural system. It is concerned with the ideals, practices, and dispositions that are promoted through educational materials, enacted by students and teachers, and aspired to by those who are excluded from schools.

I show that gendered schemas of bodily restraint and female sexual vulnerability are essential components of this cultural system. These pervasive schemas opposing sex and schooling shape aggregate-level demographic patterns, in terms of educational outcomes as well as sexual relationship trajectories. This analysis reveals new insights into how cultural meanings, and the various ways people respond to and enforce them, constitute the patterns that we observe using survey data.

The dissertation consists of three empirical studies that use a variety of qualitative and quantitative data sources, including a linked set of over 100 in-depth interviews with teachers and students and longitudinal survey data collected in Balaka, Malawi from 2009 until 2012. The first chapter identifies the sources of these cultural narratives linking sexual restraint and educational success. Institutional theory argues that African schools in sub-Saharan Africa are part of an increasingly homogeneous and secular “world culture.” I argue, however, that the missionary foundation of education in sub-Saharan Africa laid the groundwork for a locally distinct conception of education, where schooling is understood as a set of pious practices through which individuals seek salvation. Using archival records, I show that Christian missionaries in Africa have played an instrumental role in shaping the institutional forms of

schooling, from the initial construction of schools to serve evangelical purposes to the slow and incomplete transition of educational authority from the missions to the government. Using interviews with teachers in Southern Malawi, I show that success in schooling is perceived as a form of *ascetic devotion*. Education is primarily a moral, rather than academic, endeavor, and salvation is achievable through the avoidance of profane temptations.

The second chapter shows that these cultural narratives are part of the causal process leading female students to leave school after becoming sexually active. Interview evidence reveals that relationships are viewed as causing students to leave school through three mechanisms: increased absenteeism, poor academic performance, and pregnancies. Longitudinal survey data show that female students do indeed face an increased risk of leaving school if they are in a sexual relationship, but this association is not explained by any of the three mechanisms emphasized in the qualitative data. Returning to the interviews, I show that the teachers, parents, and students behave in accordance with this deeply embedded cultural schema, and in so doing help to sustain its relevance in the lives of students.

In the third chapter, I examine how these cultural schemas surrounding education lead to the stratification of sexual experiences. I collected detailed event sequences describing respondents' romantic relationships, using a card-sort technique implemented as part of the longitudinal survey. I employ optimal matching and hierarchical clustering techniques to sort these sequences into clusters, and show that these groupings are strongly correlated with educational attainment. I spend the second half of this chapter examining three competing theories, each associated with specific causal mechanisms through which formal schooling structures women's sexual experiences. I find that rather than shaping sexual behavior through the accrual of human capital or through instilling different ideals, education seems to position women differentially in the sexual social field, allowing them to be perceived as more attractive and to have access to more desirable sexual partners.

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# 1: INTRODUCTION

In July 2009, I visited the office Edson Masomba<sup>1</sup>, the local District Education Manager, in order to obtain permission to enter schools for research purposes. Before meeting with him, I had to pass through three different secretaries and schedule the appointment two weeks in advance. His office is spacious and grand, with velvet-upholstered chairs and framed certificates and photographs lining the walls. Edson has the stout belly carried by many men of influence in Malawi, and speaks with a cultivated, British-inflected English. In short, Edson Masomba is a man of considerable esteem, a local elite.

When he asked me about my research, I told him that I was interested in what people think education does for people, how it changes people's lives. He nodded and said, "Yes this is important research. I will tell you about my own experiences with this." I expected him to tell me about transformative educational experiences in his past and how going to school had shaped him into the man he is today. Instead, he began by saying "You know, I myself only have a master's degree, I can say that I have not gone very far with my schooling." He confided to me about how frustrated he was that he still does not have a doctorate degree, and described his efforts to gain admission to a distance-learning program in South Africa.

\*\*\*\*\*

I met Anna in the summer of 2008, when she knocked on my door at 6:30 AM, mop in hand, ready to clean the hotel room I was staying in. I was surprised to hear her speak English to me, and I asked her how she learned the language. She smiled and proudly told me that she was enrolled in classes at a secondary school down the road. Later, I learned that this was her fourth time enrolling in Form 1, the first year of secondary school. She was never able to find the money to pay for the whole term, and thus was not allowed to progress to the next level. Anna enrolled without expecting to attend classes, because she worked full time at the hotel and then went home to care for her two-year-old child. She was not eligible for any of the scholarships that the school gave to needy students to help with their fees, as she was not an orphan and had given birth to a child.

She enrolled each year, hoping that her luck would change and knowing it probably would not. Anna was 23, and had little chance of finishing school. She received no instruction or

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<sup>1</sup> All names of Malawian respondents or informants included in this dissertation are pseudonyms. The same pseudonyms are used throughout the dissertation.

information as a result of her decision to enroll. Yet she continued to financially invest in education, paying the first deposit at the start of each academic year.

\*\*\*\*\*

Chotsani was an interviewer for the longitudinal research project that I worked on in 2009. She was about 19 years old, with a good eye for fashion and a hearty laugh. Knowing that I was trying to learn about how people think about the future in Malawi, she spoke often to me about her own aspirations. Chotsani wanted to be a nurse and work in one of the rural HIV testing clinics. She had passed the exams required at the end of secondary school, but had not scored high enough to qualify for nursing school, so was studying to retake the exams.

One day Chotsani came to where I was working to tell me excitedly that she had signed up for a certificate (a 6-12 month post-secondary degree program) from a local private college. The degree would be in “purchasing and supply.” I asked her what this meant, what she would learn from such a program, and Chotsani wasn’t sure. I asked her if this meant that she was considering other careers besides nursing, and she said she was not. In Chotsani’s words, “I know that it will not help for nursing but at least I will get a certificate, I will go a little further.” Two years later, Chotsani was still trying to get into nursing school; the purchasing and supply certificate had not led to any employment opportunities. But she did not regret taking the course. As she said, “now I have been to college.”

\*\*\*\*\*

These three individuals occupy very different positions in rural Malawi: an older gentleman with over a hundred people under his management, a cleaner and single mother, and a young and unmarried temporary researcher. What these three stories share is that education is not being sought after for specific knowledge or skills. Edson already has a great deal of education, and is at the top of his field, but longs for more. Anna has relatively little and is unlikely to succeed in gaining more, but continues to enroll in classes she never attends. And Chotsani chose to earn a credential with little clear market value in rural Malawi, one that is unlikely to move her forward towards her goal of being a nurse. For each of them, the pursuit of schooling seems to be more about how they view themselves, and who they want to be, and less about academic learning or concrete opportunities for employment. In short, they speak not of their desire to be *educated* but rather of their yearning to be *schooled*.

This dissertation examines education as a cultural system. It is concerned with the ideals, practices, and dispositions that are promoted through curricula and educational materials, enacted by students and teachers, and aspired to by those who are excluded from schools. In particular, I focus on the consequences of schooling culture for how people think about and respond to young adult romantic relationships.

## THEORIZING EDUCATION AS A CULTURAL SYSTEM

To help elucidate what I mean by describing education as a cultural system, I offer five metaphors representing the different ways that schools create and sustain cultural meanings.<sup>2</sup> First, schools are *stencils*, instilling in students a homologous and recognizable set of practices, beliefs, and dispositions. Second, schools are *engravers*, inscribing on students labels and credentials that are socially consecrated and that alter their self-identity. Third, schools are *sieves*, sorting students into distinct social communities and allocating increasingly exiguous opportunities among cohorts of aspiring applicants. Fourth, schools are *incubators*, creating a distinct and metered period of adolescence and causing other important life transitions to be delayed. And finally, schools are *altars*, sanctifying certain types of behavior and inspiring sacrifice and emulation. In the sections that follow, I describe each metaphor as it relates to school culture and outline what considering schools in these ways can tell us about the meanings surrounding education in Malawi.

### Schools as Stencils: Producing Homologous Practices among Students

*The man which education is obliged to make of us is not the man as nature has made him but as society wishes him to be.*

– Emile Durkheim (1956)

Schools socialize youth through habitual routines of formalized practices and disseminate values and ideologies through instruction and disciplinary codes. In this way, schools can be thought of as stencils: they take in unruly and untrained children and aim to produce adults with standard and recognizable patterns of values, habits, and social relations. Bourdieu (1998:109) describes the routinized exercises through which schools produce homologous dispositions in their graduates:

The ordinary *cursus* of “elite schools” exhibits all the characteristics of a *social competence*, ... including retreat from the habitual environment, a break with all family ties (both of these through more or less strict boarding practices), entry into an educational community, the transformation of an entire way of life, *ascesis*, physical and mental exercises intended to awaken aptitude for rebirth, and repeated testing of the degree of charismatic qualification attained, all of these being so many trials leading gradually to the formal reception of the “approved” into the circle of chosen and granting access to the “consecrated life.”

The extent to which schools seek to transform students’ “entire way of life” is perhaps even more dramatic in sub-Saharan Africa, for two reasons. First, formal schooling was introduced in this context with the specific aim of disseminating the values, practices, and social relations of

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<sup>2</sup> Two of these metaphors (sieve and incubator, as well as the idea of using metaphors in this way) are loosely adapted from Stevens, Armstrong, and Arum’s (2008) cogent analysis of the sociology of higher education in the United States. My inquiry considers schools as cultural systems and focuses on secondary schools in Malawi. While we use two of the same conceptual metaphors, their application and relevance are quite different in the two cases.

Western Europe and Victorian Christianity to native families (Caldwell 1980; Comaroff and Comaroff 1991; Masemann 1974; McCracken 2005; Morrow 1986). Johnson-Hanks (2006: 83) describes how schools in Cameroon continue to rely on discipline to instill Christian identities, habits, and dispositions in students:

The value of discipline in the contemporary Beti honor system is directly related to schooling... In school, and especially the elite Catholic schools, children are explicitly trained through discipline. Indeed, some school activities appear to have no other function. Schools with reputations for particularly rigorous discipline are highly valued by parents and students alike. Through school discipline, students are thought to attain self-dominion- they will internalize the discipline of school to become self-disciplined, Christian adults.

And second, due to resource constraints, schools in sub-Saharan Africa are based around imitation and discipline rather than participation and empowerment (Frank and Meyer 2007; Meyer, Nagel, and Snyder 1993). School days in this context revolve around a schedule of assemblies, call and response drills to facilitate the memorization of materials, and exercises designed to instill discipline among students. Classrooms are overflowing with students, teachers are in short supply and thus face grueling schedules and little time for preparation or grading, and students have minimal access to books, computers, or libraries. Education is rarely characterized by experiential learning and independent discovery; instead, students learn in large groups, and they do so through recitation and memorization. Schools in Malawi are also sites of rigid hierarchies, with teachers commanding authority and subordination at all times from students. Among students, complex webs of prefects, sub-prefects, head girls and boys, and other titles constitute a substrata of authority; unlike student councils in the United States, these positions are part of the disciplinary apparatus of schools.

I show in this dissertation that schools devote considerable energy and time to practices aimed at postponing sexual activity and promoting modern, disciplined relationships. School policies highlight rigid expectations of abstinence and teachers carefully monitor students, both inside and outside of school, for errant sexual activity. In life skills classes, morning assemblies, afternoon AIDS clubs, stories read in English class, and discussions in biology, students are instructed to resist the temptations of peer pressure, sexual desire, and sugar daddies. They sing songs and perform skits about the dangers of love relationships. They keep their hair cut short and are subject to inspections over how long their skirts are and whether they are wearing jewelry. They spend their days sitting in uncomfortable seats, passively obeying directives. Through daily exercises in bodily restraint and passive listening, students learn to temper their passions and structure their behavior.

## Schools as Engravers: Labeling and Categorizing Youth

*“The bureaucratization of capitalism, with its demand for expertly trained technicians, clerks, et cetera, carries specialized examinations all over the world.... The development of the diploma and the universal clamor for the creation of educational certificates in all fields make for the formation of a privileged stratum in bureaus and in offices.”*

– Max Weber, 1946

Weber emphasized the extent to which formal schools label and categorize people through diplomas and examinations, marking them as qualified for specific positions in society. In this way, schools act as engravers, marking students with credentials that communicate their status in future social interactions. As Bourdieu (1998:109) writes, “Dispossessing individuals of the value they believe themselves to have, the educational institution puts itself in the position of being able to restore the value it initially took away, by means of the title that establishes them as licensed members of the group.”

Collins (1979) describes how the United States became overly “credentialed” in the latter half of the 20<sup>th</sup> century. Due to the professionalization of fields including medicine, law, accounting, and engineering, the currency of academic credentials no longer reflect one’s capacity for learning but rather one’s readiness for a specific occupational placement. And with increasing educational attainment, previously legitimating qualifications such as a high school diploma or business college degree grew meaningless as more and more students acquired them. These developments resulted in a period of “inflation” in the worth of diplomas, resulting in youth seeking still higher credentials in the hopes of gaining a competitive advantage (see also Bourdieu 1984).

Dore (1997) theorizes that this problem of credential inflation is more severe in developing countries. Because they countries need to “catch up fast,” they tend to import schooling, industry, bureaucracy, and technology at the same time, adopting the formal training programs simultaneously with the institutions requiring skilled labor and skills. At the same time, the chasm separating skilled labor from other jobs is particularly wide in poor countries; thus demand for official credentials increases. The quality of instruction suffers as a result of this spiral of credentials; Dore (1997:10) distinguishes between “schooling which is education and schooling which is only qualification, a mere process of certificating;” in the latter case, students and teachers become so focused on the qualifications that the learning is compromised.

Credentialism abounds in Malawi. Swidler and Watkins (2009:1190) describe how secondary-school graduates who are unable to find jobs often volunteer for non-governmental organizations, attending trainings and acquiring ever more certificates:

Far from alienating these young volunteers, sometimes arcane, elaborately formalized lessons... fulfilled deep aspirations for identity and status, preserving symbolically the sense of self that the pragmatic demands of their everyday lives continually threatened to overwhelm.



I came face-to-face with the importance placed on schools as credentialing institutions in 2008 when I sought to hire qualitative interviewers for the first time. I posted a notice in town about a vacancy for a temporary research position, and was met the next day with a long line of hopeful applicants, each bearing piles of papers indicating various degrees, certificates, and licenses. These qualifications were often seemingly useless for my goal of hiring a qualitative research assistant, such as a certificate in “home-crafts” or a receipt for a weeklong accountancy course. Yet each interview began with a display of official qualifications, the applicant proudly reading the name of each credential and the school where it came from before we commenced talking about interviewing or research experience.

The credentials earned through formal schooling only rarely lead to stable employment in Balaka. Yet beyond signaling to future employers, academic qualifications convey social signals as well. Educated Malawians often exaggerate the social distance between themselves and their “village peers.” In past work (Frye 2012:1600), I described how in-school interview respondents spoke negatively about women their age who were not in school:

Respondents describe their peers who left school earlier than they did as morally inferior to them, and thus establish social distance between themselves and their non-schooling peers. These women are articulating a social hierarchy based on effort and striving, a more finely graded metric than the economic hierarchy of educational credentials used in the workplace.

These social distinctions corresponding to educational credentials are often expressed in reference to sexuality and marriage. When women describe who they want to marry, they equate being educated with being a good husband; one who will not “not love sleeping around with other women” and who “will not beat or shout” but who will instead be “supporting” and “loving and understanding” (Frye 2012: 1601). The idea that educational credentials correspond to differences in sexual propriety is often emphasized when Malawians are speaking to foreigners or other outsiders. As Watkins and Swidler (2013:201) write, “The educated cosmopolitans like to tell foreigners about the exotic customs of the villagers, such as particular sexual behaviors or widow inheritance.” By accentuating these different patterns of sexual behavior, educated Malawians attach moral significance to the labels and categories established by schools.

### **Schools as Sieves: Sorting Students into Communities and Couples**

*“Distributing streams of students into groups as homogeneous as possible in terms of the fundamental determinants of their dispositions means that, as we have seen, the cultural insulation so constituted provides all those who share in the modal habitus with the enchanted experience of a social paradise... The aggregative segregation operated by the educational institution is undoubtedly the strongest operator of the social structuring of affects, and friendships or love relationships among classmates are... a lasting basis for solidarities and exchanges of every kind.”*

– Pierre Bourdieu (1998)

Schools stratify members of a cohort into different social worlds (Kerckhoff 2001; Spring 1976). From the moment they first enter school, children are channeled into different pathways depending on how they perform, what their parents can afford, and, in Malawi, a large amount

of luck. As such, schools act as *sieves*, taking in large cohorts of children and sorting out progressively more “selective” fractions of them to pass onto the next level or into the more elite school. These differential schooling trajectories influence not only what jobs might be available for students when they graduate, but also who they will spend the majority of their days with during childhood and adolescence (McPherson, Smith-Lovin, and Cook 2001). As such, these “sorting machines” shapes the formation of friendship networks, and these patterns of friendship homophily persist long after young people leave school (Arum, Roksa, and Budig 2008; Blau 1994; Marsden 1987; Spring 1976; Stevens, Armstrong, and Arum 2008).

In Sub-Saharan Africa, few studies have examined the role of schools in structuring friendship networks among youth. What we do know suggests that youth who stay in school into adolescence are more likely to be friends with their classmates than with those who are not in school (Poulin 2009). There is also evidence that friendship networks formed in school influence students’ sexual behavior. Across sub-Saharan Africa, due to high levels of grade repetition and a large proportion of students entering school after the recommended age, friendship networks formed in schools are considerably more heterogeneous in terms of age than are those in the United States. Lam et al (2009) find that due to the effect of interacting with older peers, students who are ahead of the majority of their age cohort are more likely to be sexually active than their peers who are in school with more of their age-mates.

In addition to influencing the formation of peer networks, these processes of social sorting also shape the selection of sexual and marital partners. DiMaggio and Mohr (1985:1234) highlight the importance of shared cultural resources in partner choice and in determining whom people select as partners and whether their relationships progress to marriage. As Waller and Hill write, these shared cultural resources give couples “an area of rapport, a common universe of discourse” (1951: 176-77). Arum et al (2008: 110) describe how schools and, in particular, colleges “are formally and explicitly... to promote social environments intended to enhance opportunities for the type of social interactions conducive to the flourishing of romantic attachment.” As such, schools structure who meets (and marries) whom (Arum et al. 2008; Bourdieu 1998; Kalmijn 1999; Mare 1991; Smits 2003), and were found to be more efficient in fostering marital relationships in the United States than neighborhoods or workplaces (Kalmijn 1998).

The expectation that students will marry people they meet through school is somewhat less likely in the African context, where strong norms of *hypergamy* (men marrying women of lower social status) continue to structure marriage decisions (Lloyd and Mensch 1999; Lloyd 2005; see also Basu 2002). Under this system, a man searching for a potential wife would likely turn not to his classmates but to those a few grades below him. Nonetheless, such a marriage system is still characterized by schools structuring the coupling of men and women. Even if youth are not likely to marry people from their own class, they still face a range of socially acceptable options that is determined by how far they have gone in school.

There is also some evidence that educational *homogamy* (men marrying women of similar educational status) may be increasing in sub-Saharan Africa. A comparative study using data

from 55 countries (including 7 from Africa) found that educational homogamy among secondary school graduates is negatively associated with economic development and is higher in countries with a smaller proportion of people at the highest education level (Smits 2003). And a recent analysis of census microdata from 56 countries show a worldwide trend towards gender symmetry in educational levels among married couples (Esteve, García-Román, and Permanyer 2012). Research on trends in homogamy over the 20<sup>th</sup> century in the United States shows that as average educational attainment increases, the likelihood that people will have met their partners in school also increases (Mare 1991; Schwartz and Mare 2005). Malawi and other countries in sub-Saharan Africa have recently experienced a rapid and dramatic increase in schooling rates (Kendall 2007; Al-Samarrai and Zaman 2007); thus we can expect to see schools play an increasing role in determining who marries whom in this context.

### **Schools as Incubators: Shifting the Relative Timing of Other Life-Course Events**

*“Childhood was extended... when an intermediary stage was introduced: the stage of the school, of the college. The age groups in our societies are organized around institutions.”*

*“Henceforth it was recognized that the child was not ready for life, and that he had to be subjected to a special treatment, a sort of quarantine, before he was allowed to join the adults... The school shut up a childhood which had hitherto been free within an increasingly severe disciplinary system.”*

– Phillippe Ariès (1973)

The fourth way that schools create and sustain cultural meanings is by changing the tempo of the transition from childhood to adulthood. Schools institute a metered and gradual rhythm of social aging, corresponding with annual transitions from one year to the next. At the same time, schools extend the duration of youth, with students remaining dependent on their parents and not recognized as being ready for sexual activity, marriage, or childbearing. In this way, schools can be thought of as *incubators*, constructing a sterile temporal space in which students are exempt from other social responsibilities and life transitions that would normally be expected of them at their age.

Prior to the introduction of formal schooling, life course transitions in sub-Saharan Africa were largely grouped around initiation ceremonies, which marked dramatic status changes (Bucholtz 2002; Comaroff 1985; Schlegel and Barry 1991; Tournas 1996). With widespread formal education, youth mature through a series of finely graded transitions, aging forward slightly with each year of education (Buchmann 1989; Meyer 2003). This process of metered and gradual social maturation has consequences for the way that children of various ages are treated by families and in communities (Bucholtz 2002; Caldwell et al. 1998). In a context of delayed entry into school and widespread grade repetitions, this metered rhythm of schooling transitions hides considerable age heterogeneity within school cohorts (Grant and Hallman 2008; Lam et al. 2009; Lewin 2009). A 17-year-old who is in primary school is viewed by her parents and community as younger than one who is in secondary school; both are seen as less adult than their age-mate who has already dropped out of school (Stambach 2000).

At the same time, schools have long been recognized as stretching out the period of youth. Students are socially treated as minors, not yet expected to assume the responsibilities and

roles of adults. As students stay in school longer, other key life transitions— marriage, independence from parents, childbearing, and employment— are delayed (Buchmann 1989; Elder 1998; Hogan 1978; Kohli 2007; Meyer 2003; Shanahan 2000). In the United States, increasing educational attainment led to a standardization and compression of these life-course transitions: youth tended to get married, start work, and have children in a shorter period of time (Hogan 1981; Shanahan 2000). At the same time, increasing education also brought more agency for youth to construct their own biographies and a greater variety of cultural models, thus producing more individuality and diversity in the timing and sequencing of life-course transitions (Buchmann 1989; Giddens 1991; Kohli 2009).

In sub-Saharan Africa, the introduction of formal schooling has been credited with the emergence of the life stage of adolescence, defined as the period when youth have gone through puberty but are not yet considered as adult (Caldwell et al. 1998). Widespread evidence documents that exposure to formal schooling is associated with delays in other life transitions in sub-Saharan Africa. More educated women tend to get married and have children at older ages (Blanc and Way 1998; Lloyd and Mensch 1999; Lloyd 2005). And due in part to the strong cultural opposition between romantic love and education, women who stay in school longer have been consistently shown to have sex for the first time at older ages (e.g., Agha, Hutchinson, and Kusanthan 2006; Clark and Mathur 2012; Cooper et al. 2007; Duflo et al. 2006; Erulkar and Ferede 2009; Hallett et al. 2007).

In the aggregate, the widespread increase in average educational attainment in sub-Saharan Africa is associated with a secular increase in age at sexual debut. Data from 22 African countries with multiple Demographic and Health Surveys available between 1985 and 2010 shows that the median age at first sex among women aged 25-29 has increased over time in all but one of these countries, at an average rate of half a year per decade (author's calculations, NSO-Macro 2011). Zaba et al (2004) also find evidence of a secular rise in age at first sex across six sub-Saharan African countries.

### **Schools as Altars: Symbolic Ideals Inspiring Sacrifice and Hope**

*“Young people today yearn to become educated in order to leave rural villages where farm work demands exhausting labor. They want to be literate, to wear well-tailored Western-style clothes, to speak English... and to acquire civil service or business jobs... The obstacles to realizing these ambitions, however, are myriad.”*

— Bledsoe and Cohen (1993)

Since the early days of missionary activity in the 1890s, schools in sub-Saharan Africa have invoked vivid images of a better life, full of affluence and opportunity (Banda 1982; Comaroff and Comaroff 1991; McCracken 2005; Riemer 2008b). Today's students are highly optimistic about their chances of achieving ambitious educational and career goals (Frye 2012; Meinert 2009). Schools also connote a clear system of effort and reward, in which studying hard, obeying school rules, and maintaining strict moral discipline bring high test scores, admission to elite schools, and, eventually, diplomas (Coe 2005; Johnson-Hanks 2006; Vavrus 2003). Yet the objective reality for many African students is rife with unrealized aspirations and disjuncture

between effort and outcome. Schools can thus be construed as *altars*, inspiring ritualistic striving, sacrifice, and faith from devotees hoping to receive salvation.

As far back as 1993, the widespread optimism of youth entering schools was well documented; Bledsoe and Cohen (93) wrote, “Almost without exception, girls entering school have ambitions to go on to college or professional schools.” I found evidence of this pervasive optimism in my own research in Malawi. In 2010, I asked respondents of Tsogolo la Thanzi, the longitudinal survey that I use as the main source of data for this dissertation, to estimate their chances of finishing secondary school. Out of 269 female students who were still in primary school, the average response was 78%.

According to school enrollment statistics, the actual probability is much lower. According to 2007 data from the United Nations Educational, Scientific, and Cultural Organization (UNESCO), only seven percent of students in their final year of primary school will graduate from secondary school, if current rates remain constant (UNESCO 2007, 2008a, 2008b). Considering that all of the respondents included in the above estimate were at least three years behind grade level for their age and most were not yet in their final year of primary school, these women faced even lower probabilities for success than the national estimate of 7%. These dismal statistics are not specific to youth at this juncture. Beginning at the early primary level and continuing through to universities, education statistics reveal widespread attrition and high rates of grade-repetition, and the vast majority of educational endeavors end in failure (Chimombo 2005; Mundy 2007; UNESCO 2012).

Schools encourage youth to work hard and maintain high standards of moral discipline in order to achieve academic and career success (Grant 2012; Johnson-Hanks 2006; Meinert 2009). While teachers and curricular materials do acknowledge the barriers that students face in reaching their goals, these barriers are portrayed as being assailable, and students are often led through exercises in which they brainstorm ways to overcome these hurdles (e.g., Malawi Institute of Education 2008; PSI Malawi 2004). At the same time, newspapers and radio shows often feature profiles of successful people declaring that they never lost hope in their scholastic pursuits, even when success seemed a remote possibility. The underlying message is that hard work and unflagging optimism will eventually be rewarded (Frye 2012). However, educational outcomes are most often determined by forces out of students’ control, including lack of parental resources, poor school quality, and insufficient slots open to students at the secondary and tertiary levels (Bloom, Canning, and Chan 2006; Chimombo 2005; Lloyd and Mensch 2008; Munthali 2006).

As a result, a wide gap exists in Malawi between what people hope to receive from schools and the benefits that educational institutions actually deliver, with a corresponding disjuncture between what is believed to influence educational outcomes (hard work, optimism, sexual abstinence) and the factors that actually determine how far most students go in school (luck and access to resources). The widespread belief that persistence and effort will be rewarded lends a sacrificial, devotional aspect to the pursuit of education. Schools symbolize the potential for salvation, seldom realized but always possible.

## OUTLINE OF DISSERTATION

In the chapters that follow, I examine the consequences that these meanings and practices surrounding education have for how people think about, experience, and respond to sexual relationships through three separate empirical studies. Each chapter engages with a distinct body of theory, asks a unique set of research questions, and uses a different set of data. I employ a diverse arsenal of methodological approaches, from optimal matching to archival and historical analysis. Despite these differences, these three chapters share a theoretical focus on schooling as a cultural system and an empirical concern with the interplay between educational experiences and romantic life in Malawi.

### **Chapter 2: Schooling as Devotion: Missionary Templates and Contemporary Practices of Sexual Interdiction**

This chapter challenges the standard image of education in sub-Saharan Africa as part of a secularizing, rationalizing institution spreading an increasingly homogeneous “world culture” across the globe (Baker and LeTendre 2005; McEneaney and Meyer 2006; Meyer, Ramirez, and Soysal 1992; Ramirez and Meyer 1980; Wiseman and Baker 2005). I argue instead that the missionary foundation of education in sub-Saharan Africa laid the groundwork for a locally distinct conception of education, in which schooling represents a set of pious practices through which individuals seek salvation. While at the national level, the content of the curriculum in contemporary Malawian schools is primarily secular, at the local level, the cultural meaning of education is infused with religious symbols and ideals centered on bodily restraint and sexual virtue. This missionary foundation has evolved into a cultural model of educational practice that is religious in two ways. First, success in schooling is perceived as a form of *ascetic devotion*; schooling is primarily a moral, rather than academic, endeavor, achievable through the avoidance of profane temptations. Second, education is conceived of as a form of *salvation*, delivering those open to it to a transcendent level of existence.

I advance my argument by first using archival records and secondary sources to trace the institutional history of education in Malawi, and then comparing these historical sources with interviews of secondary school teachers that I conducted in 2009. I then examine three alternative sources of this moralistic understanding of schooling: (1) the cultural models circulating through educational discourse and supported by international donors and non-governmental associations, (2) the positions of contemporary religious organizations, particularly the Catholic church, which continues to provide financial support for the public education system in Malawi, and (3) and the local, historically situated understandings of what it means to be educated and what it takes to be successful in school. I find evidence suggesting that the third source is the primary mechanism through which these moralistic understandings are sustained in contemporary Malawi.

This analysis advances our understanding of the “world culture” of education, which has heretofore been primarily examined through school curricula, textbooks, educational policies, and other materials constructed at the national level. To my knowledge, no study has yet

examined whether these global models hold at the local level, when talking with teachers and observing classes. I find that the world culture perspective does a poor job of explaining how education is locally understood and practiced. Teachers' overwhelming concern with disciplining the sexual behavior of students, along with the religious imagery that local educators draw upon when discussing education, directly contradict the fundamental tenants of world culture theory, which state that schooling practice is growing increasingly secular and that schools are moving away from enforcing strict discipline and towards encouraging critical thinking and individual empowerment (Baker and LeTendre 2005; Meyer et al. 1977, 1992).

At the same time, this paper increases our understanding of how the missionary foundations of institutions in Africa continue to structure cultural meanings. While anthropologists have made important contributions to this topic (Comaroff and Comaroff 1991; Keane 2007; Riemer 2008a), few sociologists have examined the enduring effects of missionary history. My finding that this history continues to shape institutional discourse to this day is consistent with Stinchcombe's theory of organizational imprinting, which predicts that the social and economic environment existing when a particular type of organization first emerges will determine the social structure of present-day organizations of that type (Johnson 2007; Stinchcombe 1965). Without taking account of these historical contingencies, a researcher examining these practices would likely develop an inaccurate understanding of educational culture in Malawi. For example, one might attribute teachers' preoccupation with bodily restraint to the generous funding for school-based HIV prevention programming in recent decades. Yet HIV typically came up only as an afterthought in my interviews, and several teachers positioned themselves in *opposition* to these globally funded prevention programs. Rather than describing sexual interdiction as an emergent concern, most teachers emphasized continuity with their own educational experiences decades prior. By tracing the institutional culture of schooling from its inception through to today, this chapter provides a deeper understanding of why sexual activity and educational outcomes are tightly culturally entwined in this context.

### **Chapter 3: Sex and Scholastic Success: Cultural Schemas and Demographic Outcomes**

In this chapter, I show how shared narratives opposing sex and schooling help to explain the statistical associations between relationship status and educational outcomes. In-depth interviews with teachers and students emphasize three mechanisms through which sexual relationships lead students to leave school: diminished academic performance, poor attendance, and pregnancy. Statistical analyses show that female students in sexual relationships are indeed considerably more likely to leave school; this association persists after controlling for selection on observed and unobserved characteristics. However, when the survey data are used to examine the three mechanisms that emerged from the qualitative sources, these pathways do not account for the observed association between having sex and leaving school.

Returning to the interviews, I show that the cultural context itself contributes to this statistical pattern. All students in my sample, along with their teachers and parents, make decisions

within a normative environment that conjoins sex and school failure. Their reactions, decisions, and interpretations have real negative impacts on the schooling outcomes of students who are found (or suspected) to be in a relationship.

Statistical analyses also reveal strong gender differences: women (but not men) are more likely to leave school if they are in a relationship, while men (but not women) are more likely to be temporarily absent. Interview evidence also helps to explain these gender differences. I show that these cultural narratives are infused with broader understandings of gender and sexuality, specifically women's vulnerability and the irresistibility of sex.

This chapter will be of interest to scholars of education and adolescent sexual behavior, as it addresses a fundamental yet unanswered question: do adolescent sexual relationships negatively impact schooling outcomes? Scholars have consistently documented a negative association between adolescent sexual activity and various schooling outcomes in the United States, yet the degree to which this well-documented association indicates a causal relationship between sexual behavior and scholastic outcomes remains unresolved (McCarthy and Grodsky 2011; Sabia and Rees 2009). In Africa, scholars have also questioned whether documented associations are the product of causation or correlation (Grant 2012; Lloyd and Mensch 2008). I show that at least in the Malawian case, the cultural antinomy between scholastic success and sexual behavior is itself a key element in the causal story linking these two domains in the lives of students. Given that a cultural opposition between sex and schooling has been documented in the United States as well (Fine and McClelland 2006; Luker 2006; Schalet 2011), it is likely that cultural schemas also play a role in shaping these statistical relationships in this context.

This study also reveals new insights into how cultural schemas, and the various ways people respond to and sustain them, constitute the demographic patterns that we observe using survey data. As with any quantitative data set, the survey data I use show patterns produced by people behaving in reference to shared meanings and moral standards. By examining the various ways that people attend to this pervasive cultural model, I am able to better understand the seeming contradictions between the two sources of data. These findings resonate with recent efforts in demography to incorporate insights from the sociology of culture and cognitive science (Allendorf 2013; Johnson-Hanks 2002; Johnson-Hanks et al. 2011; Morgan 2011; Thornton 2005; Watkins 2000). This emerging perspective seeks to elucidate how cultural schemas and resources influence patterns of action that are typically examined in the aggregate, such as marriage rates or fertility timing. Through systematically comparing in-depth interviews and survey analysis, this study advances our understandings of how statistical patterns reflect the various ways that people attend to the shared meanings that surround them.

#### **Chapter 4: Sex in Sequence: Education and the Orders of Intimacy**

In this chapter, I examine how relationships are experienced differently for women of different levels of exposure to formal schooling in Malawi, using detailed event sequences that I collected through an innovative card-sort method. In the first half of this chapter, I identify the most salient differences in relationship sequences, and examine the extent to which these differences



are associated with variation in educational attainment in my sample. I find that educational attainment is the strongest predictor (out of a host of socio-demographic and relationship-specific covariates) of overall variation in the relationship sequences, measured using optimal matching and hierarchical clustering to divide the respondents into groups with similar sequence patterns. The optimal matching and cluster analysis reveals two major axes of contrast between the relationship sequences: whether or not respondents report having sex before marriage, and the number of events that take place before the initiation of sexual intercourse within the relationship. Educational attainment is strongly associated with the latter but only weakly correlated with the former.

I spend the second half of the chapter testing three competing theories, each associated with specific causal mechanisms through which scholars suggest that formal schooling might structure women's sexual experiences in Malawi: (1) facilitating the development of critical thinking and cognitive abilities through exercises and formal instruction, leading to different patterns of decision-making regarding sex, (2) exposing women to different cultural schemas and moral standards about sex and romance through sexual education programs and punitive school cultures regarding sexuality, leading educated youth pursue unique sets of relationship ideals, and (3) positioning people differently in the sexual social field through practices emphasizing self-discipline and messages cultivating self-efficacy. I find that rather than shaping sexual behavior through the accrual of human capital or through instilling different ideals, education seems to situate young women differentially in a sexual social field, allowing them to be perceived as more attractive and to have access to more desirable sexual partners.

This study advances our understanding of how young adults establish and experience intimacy in this context. Most extant research on sexual activity in sub-Saharan Africa has focused on sex as a discrete outcome, divorced from its relational context. While we know quite a lot about the various "risk-factors" that make having sex hazardous, we know remarkably little about the contours of romantic life, how people meet their partners, how they spend time together, and when they decide to share news of the partnership with important people in their life. By examining relationships sequentially, this study reveals new insights into these processes. At the same time, this study contributes to the emerging literature on stratification in sexual experiences (Brooks 2010; Green 2008; Hamilton and Armstrong 2009; Martin and George 2006). I show that differences in how women's physical appearances are evaluated by highly educated female interviewers mediate the statistical relationship between educational experiences and sexual relationship patterns. The habits and dispositions that are learned in school lead these women to be perceived as more desirable, and in turn to be more likely to have relationships with men who are themselves more desirable. Finally, this chapter provides convincing evidence that the practices, meanings, and dispositions that are promoted and sustained through schools— the cultural system of education— has real consequences for how young women experience romantic relationships.

## 2: SCHOOLING AS DEVOTION: MISSIONARY TEMPLATES AND CONTEMPORARY PRACTICES OF SEXUAL INTERDICTION

This chapter challenges the standard image of education in sub-Saharan Africa, as part of a secularizing, rationalizing institution, spreading an increasingly homogeneous “world culture” across the globe (Baker and LeTendre 2005; McEneaney and Meyer 2006; Meyer et al. 1977, 1993, 1992; Ramirez and Meyer 1980; Wiseman and Baker 2005). In the pages that follow, I show that the missionary history of education in sub-Saharan Africa laid the groundwork for a locally distinct conception of education, in which schooling represents a set of pious practices through which individuals seek salvation. While at the national level the content of the curriculum in contemporary Malawi is primarily secular,<sup>3</sup> at the local level, the practice and meaning of schooling are infused with religious symbols and centered on sexual virtue.

In contrast to the history of schooling in the Western world, in which the “laicization” of education was instrumental to the establishment of rational modernity, in Africa Christianity, education, and rational modernity were introduced simultaneously through missionary evangelism. Christian missionaries have played an instrumental role in shaping the institutional forms of education, through the initial construction of mission schools to serve evangelical purposes and through the slow and incomplete transition of educational authority from the missions to the government. Religious theories do not simply provide a convenient metaphor for conceptualizing educational experiences in Africa. Rather, the institution of education was born out of the mission church, and schools and churches have remained institutionally connected to this day.

I argue that this distinct history continues to shape local understandings of education and to structure the relationship between schools and local communities. I show that the missionary roots of education continue to influence behavioral standards and emotional ideals that are encoded in disciplinary procedures and enacted in the scholastic efforts and aspirations of students. This missionary foundation of schooling has evolved into a cultural model of educational practice that is religious in two ways. First, success in schooling is perceived as a form of *ascetic devotion*; schooling is primarily a moral, rather than academic, endeavor, achievable through the avoidance of profane temptations. This devotional understanding of

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<sup>3</sup> With the important exception of Bible Knowledge, which remains a popular course at the secondary level and is taught using a syllabus written by Christian faith leaders in the 1980s. This subject is discussed in more detail below.

schooling is evident in the strict prohibition of sexuality that teachers try to enforce and the primacy that this sexual interdiction holds in the disciplinary systems of schools. Second, education is conceived of as a form of *salvation*, delivering those open to it to a transcendent level of existence. This dimension of the cultural model of schooling is reflected in the antinomy that teachers draw between earthly traditional culture and transcendental scholarly pursuits.

## **Schooling as a Global and Secular Cultural Form**

Over the past fifty years, the proportion of youth who receive formal education—both at the primary level and in universities—has increased around the world at an unprecedented rate. The geographic reach and striking magnitude of this trend have generated much research and theorizing into the implications of the global surge in scholastic achievement. As Dale and Robertson declare, “Formal education is the most commonly found institution and most commonly shared experience of all in the contemporary world” (2003:7).

Scholars interested in this worldwide trend often conceptualize education as a globally homogenizing cultural force, spreading a single (or largely singular) “world culture” throughout the world. In comparison with earlier work in comparative education, which “focused mainly on the philosophical and cultural origins of national education systems” (Carnoy and Rhoten 2002:1), this new wave of research is unabashedly oriented toward global-level analyses. In one of the first articles highlighting this “revolution” in global schooling statistics, Meyer et al. (2007) find that the surge in enrollment is not explained using standard national-level variables. They conclude that:

Education everywhere expanded independent of the constraints and stimuli that economic, political, and social structures provided in previous time. This universal increase in education has led us to speculate that the causes of this expansion lie in characteristics of the contemporary world system, since such characteristics would affect all nations simultaneously (2007:255).

More recently, when discussing the increase in university-level schooling, Frank and Meyer describe an unfolding process through which the local is made global; they write, “The local particularities both of that which is known and those who know are increasingly reconstituted in global and universal terms” (Frank and Meyer 2007:289). According to world culture theory, this homogenization of content is not a product of coercion, but rather is produced through the exchange of ideas and policies through international educational databases and transnational partnerships, along with economic pressures to conform to the neoliberal state model (Spring 2008). Baker and LeTendre state that:

Much of the grammar of schools and the ideas behind it are reproduced and reinforced at a global level... Widespread understanding repeatedly communicated across nations, resulting in common acceptance of ideas, leads to standardization and similar meanings, all happening in a soft, almost imperceptible, taken-for-granted way. (2005:8)

Focusing on national policies, standardized curricula, and centralized enrollment data, these studies demonstrate that as more and more children enter the classroom each year, national education offices have worked to bring school systems into harmony with a globally circulating

discourse, with the goal of preparing youth to compete in the global economy. Not only do more children around the world share the experience of attending school; the lessons and activities that they participate in within these schools have become more uniform as well.

The content of schoolbooks and lesson plans, according to world culture theorists, also reveals a global shift from emphasizing discipline and imparting explicit knowledge through rote learning towards empowerment and the cultivation of critical thinking capacities. In their analysis of primary school curricula from countries around the world, McEneaney and Meyer write that:

Schooled knowledge moves from authoritative structures of fact and skill and discipline to dramatic emphases on (a) broadened individual participation in (b) a rationalized knowledge system that functions as an umbrella of understanding and comprehension (2006:207).

Research examining educational policy in Botswana during the early 1990s describes this curricular shift, from “older restricted forms of knowledge” to a new model of education in which “the stress is on the child as a participatory individual at the center of this great enterprise” (Meyer et al. 1993:465). At the same time, disciplinary codes emphasizing rules and rigid authority structures have given way to more supportive and pliant structures for controlling behavior. In Botswana, Meyer et al. describe an increase in counseling services and the restriction of corporal punishment (1993:465). As world culture proliferates, “Pedagogy shifts to empowerment rather than discipline and to participation rather than imitation” (Frank and Meyer 2007:307).

World culture theorists also stipulate that schooling across the world has become increasingly secularized, with schools institutionally divorced from churches and offering a curriculum in which the sacred is made rational and knowable. As Meyer (1977) wrote in his early analysis of education as a global cultural institution, “Educational systems... rationalize in modern terms and remove from sacred and primordial explanations the nature and organization of personnel and knowledge in modern society.” Analyzing national school curricula, McEneaney and Meyer explain that in contrast to previous periods when religious texts were revered as sacred objects, in modern curricula, these texts are analyzed as cultural artifacts (2006:196). Stambach describes how international non-governmental organizations like UNESCO and the World Bank view schools as strictly secular institutions in the post-World War II era. She writes:

Education was seen [by UNESCO, the World Bank, and USAID] as standing on its own, with little indication of those “advanced agents of civilization” (missionaries) about whom Phelps Stokes<sup>4</sup> had written previously...Indeed in the discourse of UNESCO’s International Bureau of Education, the moral economy of the Christian missionary had transformed into the secular humanism of development missions. (Stambach 2010:366).

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<sup>4</sup> A delegation sent to British colonies in Africa in the 1920s to evaluate missionary education systems. The reports made by these consultants will be discussed in more detail later in this paper.

These two phenomena - the globalization and secularization of school content – are intricately intertwined. The rationalization of what was once sacred is said to be one of the main objectives of states that engage in the project of adapting their educational system to the world culture. As Meyer, Ramirez, and Soysal describe, "The nationally rooted state, secularizing earlier religious ideas and institutions, everywhere incorporated mass education as a main enterprise" (1992:129).

## **The Gap Between Global Theory and Local Practice**

Over 30 years, world culture theorists have documented a striking degree of homogeneity in patterns of educational expansion and curricular reform across the world, and amassed an impressive amount of data to buttress their claims of cultural isomorphism in educational policy. At the same time, however, these scholars have been criticized for empirically relying almost exclusively on analyses of national-level statistics and policies, potentially leading them to underestimate the extent to which local realities deviate from global trends (Carnoy and Rhoten 2002; Steiner-Khamsi 2004).<sup>5</sup> As one critic of world culture theory writes, "The school is the major institution in which the circulation of knowledge about the modern self is positioned, yet it often is assumed to be peripheral, if considered at all" (Steiner-Khamsi 2004:iix). Buttel (2000:118) advances a similar critique of a world culture analysis of environmental policy, arguing that the homogeneity of "organizational forms" that scholars have documented at the international and national level remains conceptually distinct from "actual societal outcomes" at the sub-national level.<sup>6</sup>

When I examine school culture in Malawi from the perspective of secondary-school teachers and administrators, I find that much can be learned by comparing school-level practices to the curricular models and cultural forms discussed by scholars of "world culture." Rather than "child-centered," non-authoritative instruction designed to cultivate students' general capacities, I found teachers to be preoccupied with regulating student conduct and maintaining strict standards of moral discipline. Rather than secularizing institutions, I found local schools to be steeped in religious language and metaphors.

This clash between the educational conditions described by world culture theorists and what I found on the ground in Malawi cannot be explained by the claim that Malawi has not yet been

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<sup>5</sup> Some world culture scholars recognize that local particularities change how globally shared cultural forms are drawn upon. For example, Baker (2006:166) acknowledges the "ways in which globalized institutions are modified by local cultures, producing a steady stream of unique qualities floating around any institution as large and global as is mass education." However, local dynamics are mentioned in these studies as an afterthought, generally expected to produce minor deviations from global models.

<sup>6</sup> This call to attend to local-level interpretations and enactments of educational policy is also consonant with a broader turn toward the local in sociological research on international interventions and national policies in the developing world; much of this work illuminates the gap between the intentions of international development policies and their consequences for communities on the ground (Ferguson 1990; Escobar 1995; Li 2007; Swidler and Watkins 2009).

integrated into “world culture.” As the first country in sub-Saharan Africa to offer Free Primary Education (FPE) to all children, Malawi has received an enormous amount of educational aid and administrative support over the past two decades. Malawi’s national curricula were written with the assistance of international donor agencies (Mizrachi, Padilla, and Susuwele-Banda 2008). In her research on the FPE policy, Kendall describes representatives from international donor organizations occupying offices within the Ministry of Education, and engaging in daily meetings with national educational officials (2004:308). When I collected all of the school curricula administered by the Ministry to be used in life skills classes from 2001 through 2008, they were emblazoned with the logos of a number of international organizations, and authors were affiliated with the United Nations Family Planning Association and the United States Agency for International Development.

Indeed, given the international spotlight on Malawi’s vanguard implementation of the FPE policy, Malawi has no lack of access to models of world culture, particularly in comparison to other countries in the region. Instead, I argue that the discrepancies between world culture models of education and the local practice of schooling in Malawi are due to the historical conditions surrounding the emergence of formal schooling in Malawi, in particular the fact that missionary settlers built schools for evangelistic purposes that were later folded into the national education system. This distinct history continues to shape local understandings of education and to structure the relationship between schools and local communities.

While few sociologists have examined the lasting effects of missionary history in sub-Saharan Africa (though see Woodberry 2008; Gallego and Woodberry 2010), anthropologists offer considerable theoretical support for my claim that the religious roots of education in Malawi continue to affect practices and understandings at the local level. The canonical work in this field is Comaroff and Comaroff’s *Of Revelation and Revolution*, which examines how Nonconformist Protestant missionary attempts to “civilize” new converts continue to shape the consciousness and habits of southern Africans. The second volume describes how the national school system emerged out of the Nonconformist Protestant missions in Botswana:

Protestant evangelism was impelled by a faith in the universal human capacity for improvement. If the whole world was its parish, it was also its classroom. The civilizing mission was above all a pedagogic crusade... Schooling was the model for conversion, conversion for schooling. What is more, education in its modern, secular form... arose partly in consonance and partly in dissonance but always in dialogue with Protestant instruction (Comaroff and Comaroff 1997:412).

Echoing Comaroff and Comaroff, Riemer (2008a:444) links contemporary discourse on adult literacy in Botswana to missionary teachings, finding that literacy is discussed using Christian tropes and evangelical imagery.

Though his work is not focused on education and is located far afield of Africa, Keane (2007:81) describes how Christian conversion and a modern sense of selfhood were delivered as one by Victorian-era Calvinist missionaries in Indonesia; the Javanese conception of rational and free human subjects remains inseparable from Christian doctrine. Similarly, Pandian (2008:159) links

evangelical past to postcolonial present in India, showing how the cosmology preached by early 20<sup>th</sup> missionaries altered the “moral horizons” of Indian laborers, who viewed hard work as a “toil of virtue.”

The lingering influence of the missionary founding of social institutions in postcolonial societies is also consistent with theories about the general tendencies of organizational behavior. Stinchcombe’s theory of “organizational imprinting” predicts that the social and economic environment existing when a particular type of organization first emerges will determine the social structure of present-day organizations of that type (Johnson 2007; Stinchcombe 1965). According to this theory, we can expect the organizational structure of education in Malawi to reflect the fact that schools in this context were originally constructed in order to carry out the goals of mission leaders.

### **Theoretical Framework: Inner-Worldly Asceticism and the Prophets of Ethical Salvation**

I approach the sociology of religion from a Weberian perspective, which, as Swidler writes, is primarily concerned with “ideas that shape individuals’ understandings of the paths to salvation” (Swidler 2010). I draw from Weber’s work on religion in three primary ways. First, I focus on “psychological sanctions” originating in individual beliefs and practices, rather than what is “officially taught” (Weber 2003:97). Second, I draw on his theory of inner-worldly asceticism to describe how Malawian schools strive to mold the habits and behaviors of their students. And third, I build upon Weber’s scholarship on Christian conversion and the relationship between “prophets of ethical salvation” and traditional initiation ceremonies to explore the religious roots of Malawian teachers’ attempts to protect their students from their own culture (Weber 1993:158).

In focusing on local practices rather than national-level policies and documents, I follow the method Weber described in *The Protestant Ethic and the Spirit of Capitalism*:

We are naturally not concerned with the question of what was theoretically and officially taught in the ethical compendia of the time, however much practical significance this may have had... We are interested rather in something entirely different: the influence of those psychological sanctions which, originating in religious belief and the practice of religion, gave a direction to practical conduct and held the individual to it (Weber 2003:97).

As I will demonstrate, what is “officially taught” in schools in Malawi (according to national-level policies and curricula) does not reveal much about the “psychological sanctions” that affect the “practical conduct” of teachers and students. At the local level, education remains infused with religious imagery and principles.

Weber’s concept of “inner-worldly asceticism,” fundamental to his thesis in *The Protestant Ethic* and discussed throughout his writings about religion, is based on two axes of contrast that Weber draws between different religious systems. The first dimension concerns the extent to which individuals feel that they actively direct the course of their lives. “Mysticism” promotes a

passive acceptance of life events, while “asceticism” encourages believers to consciously structure their lives in order to prove themselves worthy of God’s grace. For ascetic believers, salvation is “the distinctive gift of active ethical behavior” (Weber 1993:164). Ascetic believers follow explicit principles and moral creeds, striving to follow God’s directions in all areas of life. As Weber describes, “For the ascetic, the certainty of salvation always demonstrates itself in rational action, integrated as to meaning, end, and means, and governed by principles and rules” (Weber 1993:35). The second dimension, the difference between “inner-worldly<sup>7</sup>” and “other-worldly” asceticism, relates to whether or not salvation is attainable through engagement with or escape from society. “Other-worldly” asceticism may provide a set of guiding principles for an elite group, cloistered away in a monastery or convent, but only “inner-worldly” asceticism provides a set of rules dictating daily life for the masses. By offering proof of salvation through daily social engagement, such a system opens up the possibility of salvation for all who show themselves deserving. I argue here that schooling is practiced at the local level as a type of inner-worldly ascetic devotion, with a strong emphasis on moral regulation and behavioral taboos. Through restraining their bodily desires and strictly regulating their behaviors, students prove themselves to be worthy of higher education.

Finally, in describing how education is conceived as a source of salvation, I draw upon Weber’s writing about initiation ceremonies in *The Sociology of Religion*. Teachers describe schools as protecting students from “dangerous” elements of traditional culture, in particular “traditional cultural practices” and “initiation ceremonies.” By bringing students out of the villages and giving them the knowledge and skills necessary to resist these temptations, teachers believe that schools can deliver youth from their “earthly” village lives to a more sacred plane of being.

Weber describes a similar fascination with protecting people from initiation ceremonies in the early days of the Christian church. He writes that initiation ceremonies “were originally associated with activities which produced or symbolized ecstasy” (1993:157). This type of “acute orgy” was targeted by “prophets of ethical salvation,” because “it actually stands in the way of the ethical patterning of life they require” (1993:158). Weber characterizes rational prophetic conversion as a “rationally planned religious sanctification [which] transformed the acute intoxication induced by the orgy into a milder but more permanent habitus, and moreover one that was consciously possessed” (1993:158). I compare this language to that used by teachers describing their duty to shield students from the influence of traditional cultural practices, and find that teachers in Southern Malawi very much see themselves as “prophets of ethical salvation” (1993:158).

## **DATA, METHOD, AND STUDY CONTEXT**

This paper draws from two sources of information: a collection of primary and secondary documents describing the history of missionary and governmental educational endeavors in Malawi and a set of interviews with secondary school teachers in Balaka, Malawi. I visited the

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<sup>7</sup> Sometimes translated “this-worldly”



National Archives of Malawi twice, for one week each time, and photographed all historical documents I found dealing with missionary history and/or educational policy. I supplemented these sources with primary and secondary documents available at the library of the University of California, Berkeley. To situate the interview responses within the contemporary cultural context, I read every issue of both of Malawi's daily newspapers, *The Nation* and *The Daily Times*, during June and July of 2009, and analyzed all articles having to do with education or offering advice to young people. I also collected all current and previous editions of life skills curricula<sup>8</sup> for secondary school classrooms (7 volumes, totaling 672 pages) as well as NGO manuals disseminated to students during in-school visits (5 volumes, 132 pages).

I conducted in-depth interviews with 28 teachers (10 were interviewed twice, for a total of 38 interviews). Teachers came from seven schools, with between 3 and 6 teachers interviewed at each school. To select the schools, I asked a local educational field supervisor to recommend the set of secondary schools with the largest presence in the study area. He provided a list of five schools. I later added two schools that do not have a great deal of "market share," yet represent growing trends: an Islamic School and a small private school.

At each school, I prioritized interviewing the headmaster, the deputy headmaster, the teacher in charge of boarding, and the teacher responsible for life skills education. After asking background questions about the school (e.g., class size, number of teachers, and school fees), the interviews were open-ended. I conducted all of the interviews in English, in a private setting. I read all interviews several times, and coded them using the Atlas.ti qualitative coding software platform. I focused my analysis on sections where teachers discussed sexual and romantic relationships or the pathways to schooling success. The excerpts included in this paper were chosen to represent commonly held perspectives emerging from the interviews.

## **Outlining the Institutional Trajectory of Schools in Malawi**

In 1889, the British founded the protectorate of Nyasaland, which would later come to be called Malawi. A decade earlier, in 1875, the Free Church of Scotland established the first two permanent missions in Nyasaland: the Livingstonia Mission in the North and the Blantyre Mission in the South. The Dutch Reformed Church joined the scene in 1889, establishing Dowa Mission in the Central region. In 1902, the Catholics opened the Montfort Mission in the South and the Mua Mission in the Central Region. By 1920, 12 separate denominations operated missions in Nyasaland, though the Scots, the Dutch, and the Catholics remained the most influential three missions throughout the colonial period (Kendall 2004).

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<sup>8</sup> Life skills refers to an approach to HIV/AIDS education that delivers broader messages about interpersonal skills and psychosocial health in addition to more specific information such as risk factors and methods for preventing infection. These curricula were written by the Ministry of Education in collaboration with USAID.

Like most Victorian Christian missionaries, the Nyasaland missions conceived of schools as channels for evangelization. In 1903, Father Guilleme, a Catholic teacher, wrote in 1903 that “the secular instruction given in these schools has only a secondary importance in our eyes, but it is unfortunately necessary, for without it we would have only very few come to learn the catechism” (quoted in Linden and Linden 1974:138).<sup>9</sup>

In comparison to the Catholics and the Dutch, the Scots developed an unusually liberal pedagogy (Banda 1982; Salanjira 2009; Kendall 2004; Linden and Linden 1974). Dr. Robert Laws, founder and leader of the Scottish mission for 52 years, emphasized intellectual development in addition to basic literacy and Christian conversion (McCracken 2005:223). Under Laws’ influence, the Scots taught history, science, and philosophy; opened two post-primary training schools; and sent advanced students to study theology in England (Banda 1982; Kendall 2004). In 1915, this liberal model was squelched when John Chilembwe, a young Malawian intellectual schooled at Livingstonia, led a revolt against unfair treatment by white farmers (Rotberg 1965). While Chilembwe would become a national hero, the revolt was harshly condemned by mission and colonial authorities. The Dutch and Catholic missions issued statements blaming Laws’ liberal pedagogy for Chilembwe’s revolutionary behavior (McCracken 2005; Salanjira 2009). Several Scottish mission schools were closed and the colonial government banned the curriculum developed at Livingstonia (Kendall 2004:65).

About ten years later, in 1924, the British government hired the Phelps-Stokes Commission, composed of American education experts, to evaluate the mission education system in Nyasaland. They reported that Western-style education was unsuitable for African students and advocated a curriculum emphasizing “the five simples”: character, health, agricultural skills, family life, and recreation (Thompson 1995:239). The Commission also called for colonial oversight, and in 1927 the Nyasaland government established the Department of Education to inspect and supervise mission schools (Banda 1982; McCracken 2005).

Within the missions, this move provoked a “general outcry against the government’s assumption of control over an education system almost completely financed by the missions” (Linden and Linden 1974:155). Mission leaders convened in 1927 and submitted a joint statement of opposition to the government’s attempt to regulate their schools (Linden and Linden 1974; McCracken 2005).<sup>10</sup> The government revoked the original Ordinance, and in 1930

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<sup>9</sup> Similarly, an early Dutch missionary wrote:

A lot of attention was given to the education of the child in such a way as to finally reach the whole nation... It was always endeavored to teach the correct values in life, that is to persuade the aborigine that material wellbeing was secondary to the correct spiritual development of the personality (quoted in Lamba 1984:377).

<sup>10</sup> L. S. Norman’s 1934 monograph provides a settler’s perspective on the issue:

published a final document containing several compromises, including the establishment of an Advisory Board composed of mission leaders to establish curricular standards (Linden and Linden 1974:153). This exchange marked the beginning of a long-standing pattern of missionary resistance to government control over education in Malawi, one that endures to this day (Salanjira 2009).

Over the next 20 years, colonial oversight of schools remained negligible. The budget allotted to overseeing and subsidizing the educational system was trifling, and schools were largely funded through mission coffers (McCracken 2005:276). Missions continued to operate “bush schools,” which were not subject to colonial regulation but often seemed indistinguishable from mission schools (Linden and Linden 1974:155). As a Nyasaland settler described, “The main object of these [bush] schools is the building up of Christian character. Actually, taking a broad view, these are the most important schools, since they give an educational foundation to the largest number” (Norman 1934:154).

Colonial supervision of mission education intensified after World War II, when the education budget increased significantly for the first time (Kendall 2004:70). The government established a centrally organized examination system and began to enforce curricular standards (Kendall 2004; MacJessie-Mbewe 2004). However, the missions remained the primary providers of education during this period, and continued to build, staff, and finance virtually all schools in Nyasaland (McCracken 2005:284). Mission churches also expanded their network of primary schools and established Nyasaland’s first secondary schools (Banda 1982:84).

In 1953, Nyasaland became part of The Federation of Rhodesia and Nyasaland, a semi-independent state composed of Nyasaland, Northern Rhodesia (now Zambia), and Southern Rhodesia (now Zimbabwe). This period saw continued missionary dominance (Rhodesia and Nyasaland Federal Information Dept 1954:8). In 1961, out of 3,082 schools in the Federation, only 80 were government schools, and these were largely concentrated in Southern Rhodesia (Sasnett and Sepmeyer 1967:898).

Malawi became independent in 1962, and Hastings Kamuzu Banda was elected President in 1963. Banda quickly overhauled the education system, establishing the Ministry of Education in 1964 and opening several government schools. He publicly discouraged missions from building new schools and turned extant mission schools into “grant-aided” schools, meaning that despite being owned and operated by churches, they were considered government schools (Banda 1982:82).

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In Nyasaland there has been no criticism of mission education by the settler community, on the other hand, there has been much against the one main school conducted by Government ... Christianity, taking a broad view, is something more than a knowledge of the Scriptures, it is a way of life and it is for competent missionaries to show the way. Africa has enough troubles and trials of its own without the introduction of others in the shape of doctrines of “intellectuals” whose knowledge of life is confined to the lamp-lit dens in Great Britain which they inhabit (Norman 1934:156–157).

While Banda strove to centralize education in Malawi, he recognized mission educators as necessary allies; without their support, the “public” education system would have splintered (Banda 1982; Salanjira 2009; Tengtenga 2006).<sup>11</sup> While the Ministry of Education assigned standardized curricula for all schools, religious instruction, designed by mission leaders, remained a prominent aspect of Malawian education throughout this period (Nankwenya 1977). Salanjira describes religious education under Banda as “a deliberate arrangement meant to accommodate the faith communities’ needs to evangelize among the learners” (Salanjira 2009:44). Banda himself was a devout Christian, and remained close throughout his life with T. Cullen Young, his former teacher at Livingstonia Mission<sup>12</sup> (Forster 2003; Short 1974).

As Banda’s regime grew increasingly autocratic and oppressive, churches provided crucial institutional backing to opposition voices (Tengtenga 2006:150). The government’s relationship with Christian churches grew tense in the 1980s, but education remained one area where relations were smoother. As one Malawian scholar describes, “It [was] easy and less risky to talk about health, education, and development. In this, the government [did] not feel threatened at all: it acknowledge[d] the church’s role as partner” (Tengtenga 2006:140). A recent editorial in *The Daily Times* offers another version of this popular history of the government and churches working “hand in hand” to provide education:

The church continued offering education and health services even after the attainment of independence. A positive development that happened was that government started working hand in hand with churches in the education sector. As government was setting up its own schools which were run on secular basis, it worked with missionary schools in harmonizing the curricula and the syllabi in primary, secondary and tertiary institutions.

Appreciating the role that the church was playing in the provision of education, government partnered with the religious groups in the running of the schools. The partnership entailed government supporting missionary schools, which previously solely depended on churches finances. This resulted in some schools owned by the churches being registered as public schools (*The Daily Times* 2010).

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<sup>11</sup> In 1965, Banda wrote a letter to the heads of several missions:

It is the intention of the Government that all new secondary schools must be Government schools. However, I would like to assure the missionaries on behalf of this house and on behalf of this Government that we are going to do all we can to give them the cooperation that they deserve. In common with others in this country, I have the greatest honor and revere the memory of such men as Dr. Laws, Archdeacon Johnson of Likoma, Dr. Herald, Dr. Scott, Rev. Andrew Murray and other missionary heroes of this country. I could never be against them; I would never try to destroy what they built in this country (quoted in Tengtenga 2006:83)

<sup>12</sup> A Scottish priest and cultural scholar, Young was Banda’s primary advisor on cultural issues, and described Chewa traditions as reflecting Christian morality and discipline (Forster 1986).

In this narrative, the transition from full missionary with limited government intervention to government ownership with strong church influence is interpreted as a smooth continuum of efforts to provide education that remained “in harmony” with the early missionary schools. Malawian schools are understood to be descendants of mission schools, and churches and government officials are viewed as cooperating with each other to provide education.

In 1994, open elections thrust Malawi into a “new dawn” of multiparty democracy. The new President Bakili Maluzi pledged during his campaign to provide universal primary education (UPE), and eliminated primary school fees during his first few months in office. Following the UPE policy, primary school enrollment exploded from 1.9 million in 1993 to 3.1 million in 1994 (Al-Samarrai and Zaman 2007). To accommodate the influx of students, the government prioritized the construction of new schools across the country. Nonetheless, up to this day, grant-aided schools continue to account for a significant proportion of secondary schooling in Malawi. According to UNESCO report, as of 2008, about 32 percent of “conventional secondary schools” (which does not include community day secondary schools serving students in rural areas) were grant-aided (UNESCO 2008b:16). According to the Association of Christian Educators in Malawi (ACEM), as of 2010, churches operated 60 percent of primary schools and about 33 per cent of secondary schools (ACEM 2010).

## **SCHOOLING AS DEVOTION, EDUCATION AS SALVATION: SCHOOL PRACTICE IN BALAKA**

In this section, I explore how the missionary foundation of schools in Malawi continues to shape how teachers understand education, both in terms of how they believe that students should achieve educational success and how they schools are framed in relation to the wider community. I explore two cultural models of schooling that are cast in religious terms. First, I describe how schooling is understood as a form of ascetic devotion, with teachers prioritizing the strict regulation of moral behavior over more academic issues. Second, I demonstrate that attending school is viewed as a type of salvation, delivering students from their village existence into a transcendent realm of humanity. Both of these arguments emphasize the role of sexual interdiction in local models of schooling.

### **Schooling as Ascetic Devotion: Sexual Interdiction and the Encouragement of Pious Practice**

In Balaka, schooling practice rests on a set of restrictive rules and taboos. Students prove their worthiness through restraining their bodily desires and strictly regulating their behaviors. This “inner-worldly asceticism” of schooling is primarily expressed through the strict restraint expected of students in all matters related to sexuality. Teachers spend considerable time and energy enforcing these taboos, patrolling the border separating behaviors pointing to scholastic success and those leading students astray. In lists of rules and teachers’ disciplinary strategies, these moral dimensions supersede concerns about intellectual performance; talking during class and failing to do one’s homework are overshadowed by transgressions related to sexual conduct.

Teachers often describe kissing, chatting with boys, or having a romantic partner as “ruining” or “destroying” students’ futures. Those who pursue romantic relationships are said to be “going nowhere,” “spoiling their chances” of securing a career. Using phrases such as “you can’t serve two masters at once” and “you can’t use your brain and your heart at the same time,” many teachers describe a strict opposition between schooling and the pursuit of romantic interests. According to this viewpoint, the two simply can’t co-occur without catastrophic consequences. This fundamental incompatibility between schooling and romantic love is often discussed in biological terms, and is understood to be an unquestionable truth. As Mr. Chomba, an English teacher from the district-level secondary school describes:

**Mr. Chomba:** At this age, being the secondary school student, we must tell them to wait. Because we know that when you mix the two, one thing will definitely suffer, especially their studies. Now at this age, with their bodies still developing, they are not yet able to balance between the studies and the love relationship. And they don’t have control over their sexual impulses, their brain cannot handle studying and the love ideas at the same time.

Teachers frequently preach this message of sexual restraint to their students during assemblies and lessons. But attempts to guide the sexual choices of students are not limited to verbal advice; student romantic behavior is strictly regulated by teachers, administrators, parents, and fellow students, and occupies a pivotal position in school disciplinary codes. During my interviews with teachers, I generally started with an open-ended inquiry into the “common behavior problems” that teachers and school administrators deal with most frequently. In all but four interviews, this question launched us into a lengthy discussion of the school’s efforts to control the sexual behavior of students. For example, Mr. Chilungo, the headmaster at a private secondary school gave the following reply to this introductory question:

**MF:** Ok. And what are the typical problems that you have here at [name of school]?

**Mr. Chilungo:** It would be, first of all, the problem that we see, when they mix, I mean, they know they are students but when they enter into love affairs these usually do also disturb their studies.

Mr. Sanudi, an English teacher at a government day school discussed not having enough time to interact with students; when pressed further, he explained that this was not in reference to teaching students academic material, but rather advising them to avoid romantic relationships:

**MF:** Ok. So um, what are some common problems that you have to deal with here at this school?

**Mr. Sanudi:** I think maybe the major problem is that we don't have a lot of time to interact with the students.

**MF:** In terms of teaching?

**Mr. Sanudi:** No, teaching is ok. But we don't have spare time to do the counseling and maybe guide them. That time is a bit limited.

**MF:** So what kinds of things would you like to counsel or guide them about, if you had the time?

**Mr. Sanudi:** At least maybe this area where we can talk about maybe the relationship between boys and girls. Since when they go home, they will meet the boys. So yes, definitely we need to

talk to them about these issues. And maybe when the girls go out of the school, even when they are going to church, or anywhere, they could find the boys.

**MF:** Ok. So if you had the time, if you had as much time as you could want, what kinds of things specifically would you tell them about boys and girls and relationships?

**Mr. Sanudi:** Maybe we should talk to them about the disadvantages of maybe having these relationships. Yeah. It would just be to emphasize that if they are indulging in these relationships, in one way or the other it will affect their performance in school.<sup>13</sup>

The fact that so many teachers brought up the regulation of relationships as their *primary* concern indicates how central this issue is to their conception of their role as teachers. These statements also tell us that teachers' images of the ideal student rest on maintaining strict moral discipline and practicing sexual restraint.

This emphasis on ascetic discipline is also evident in the lists of rules that schools enforce. When describing school rules and regulations, teachers emphasize the prohibition of sexual relationships. School rules tend to go far beyond regulating behaviors likely to directly affect classroom experiences. For instance, at the prestigious district-level government secondary school in town, the official list of rules and regulations contains three different levels of severity, each with an accompanying range of possible punishments. In the middle category, which is punishable by three to six weeks' suspension, four out of the seven offenses listed relate to sexual behavior: "kissing," "found in pairs/dark corners," "staying overnight without permission," and "wearing see-throughs." The third category, punishable with expulsion from school, includes "immoral behaviors," a term Malawian teachers use to refer to having a sexual relationship.<sup>14</sup>

As Mr. Chiyembekezo, the headmaster at a small secular private school remarked, "Everything the students do both in school and after school should be concerned with their goal, which is passing the examinations. Therefore, when boys and girls interact it should only be during school or school-related activities." Later, when I asked to see a copy of the behavior contract that new students sign upon admission to the school, included among the list of punishable offenses was the following: "If found having an intimate affair with any member of the staff or any student at this school, you should be asked to leave without any precondition." At the bottom of the page, a final statement stipulated that the teachers and staff had the right to punish students for other offenses that were not included in the list: "All other behavior that

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<sup>13</sup> This passage reflects the gendered nature of many teachers' descriptions of how sexual conduct relates to educational practice. When I questioned teachers directly about whether girls were held to different standards of sexual conduct than boys, all insisted that boys are punished just as severely for evidence that they have girlfriends or were found engaging in sexual behavior. However, the vast majority of examples provided by teachers involved female students, indicating that teachers are primarily concerned with the sexual behavior of girl students.

<sup>14</sup> The term "immoral behavior" or "immorality" appears to be a euphemism for sexuality within school conduct policies- the phrase was used in five interviews, at three different schools, when discussing sexual relationships among students. When I asked the headmaster at this government secondary school to explain this term, he stated that it means "having sexual intercourse or being intimate with another person."

disrupts classroom behavior or is morally suspect will face a penalty as dictated by the disciplinary committee.” The fact that this statement refers *either* to behavior that disrupts classroom behavior *or* is morally suspect implies that regardless of whether or not a sexual relationship is directly disturbing the classroom environment, teachers should still punish the offending students.

By far the most extreme case of disciplining sexuality that I heard about during my interviews occurred at the largest, most prestigious government secondary school. I was first told about this incident during an interview with the history teacher, only a few days after it happened. Four other teachers, including the deputy headmaster and the headmaster, offered additional insight into this incident. The following story is pieced together from these sources. Most of it is my own summary; I indicate the passages where I borrow the language of one of my informants.

The school was on midterm holiday, and only four students remained at the school, to prepare for their upcoming exams. A small group of teachers were walking around the school at ten o'clock at night, and found “three form four girls [at least 17 years old] pairing with boys, chatting in the corridors. Some were chatting, others were holding each other” (interview with history teacher). The teachers recorded the names of the students and gave them to the deputy headmaster the next day. The students were told by the disciplinary committee to submit statements of what happened, for the committee to decide on a proper punishment. As laid out in the disciplinary code that students sign, being found alone with or kissing someone of the opposite sex carry a minimum three-week suspension. A few hours after they were told to prepare written statements, one of the female students involved left the campus and went to a nearby store to purchase rat poison. She poured the poison into a bottle of soda and drank it, in what all teachers describe as a suicide attempt. Other students found her in her dorm, vomiting and barely conscious. She was taken to the hospital, where she stayed for a period of three to five days (I received conflicting reports on the duration of her stay from different teachers). When questioned about why she had done this, she said that she had been afraid of the reaction of her parents at home. When she recovered, she was given a three-week suspension, and then returned to school. When she returned, she was counseled by a teacher, who “briefed her, to say, it is not the end of the road. You just have to take the responsibility yourself to say, these things have happened this way, how can I become better in the future? How can I change my path?” (interview with headmaster)

This case demonstrates the strength of the teachers' conviction that being caught “pairing” at night is a serious offense, one that warrants severe punishment and should trigger strong feelings of remorse. Out of the five teachers interviewed about this incident in the weeks following the event, not one teacher expressed ambivalence or uncertainty regarding whether the school bore responsibility in the incident. All five teachers seemed to place the blame squarely on the student, first for engaging in such immoral behavior, and second for committing such a desperate and foolish act rather than taking responsibility for her actions, serving the suspension, and returning to school committed to improving her behavior.

Several teachers described themselves and their colleagues going to great lengths to monitor students' sexual activity. For example, Mrs. Ngosa, the headmistress at a girls' Catholic



boarding school, recounts the deliberate, prolonged effort she made to catch a student she suspected of having a boyfriend:

**Mrs. Ngosa:** I remember it was last year when it happened. They would go to church, the students would go outside to pray on Sunday. So most of the time she would stay behind, she wouldn't come back with the rest of the friends. She would come back... sometimes maybe they would come back by 12 noon, for her around one or two she is still outside. So I began to worry that when she remains behind she has a boyfriend and they might chat together. So I observed for some time, I wasn't sure. So I said, let me wait. So one day I decided to remain behind without coming [back from church]. That Sunday I remained on purpose. So around one, two o'clock I decided to start walking, and I met her coming this way. I met her with two boys actually. So when she saw me she was afraid, panicking. But I didn't want to say anything. I greeted the boys and I passed, I came to school. So when I arrived at school I had to call her, asking her who were those people? She was saying it was my brother. I asked her what is the name of your brother? She told me the name. So I said ok, that was one day. Where was your brother going? He came here to see me but since he was told that I am at church, he decided to go to church. So now from age 14 until now, your brother doesn't know that you are supposed to be in school? She said, he had a lot to tell me about our home. So I said ok. So that day she went. So I decided to call her parents, and ask do you have a son by this name and where does he stay? They said no they didn't have a son by that name, and they didn't know that person. So again I called the girl to try and find out. Each day I would ask different questions. Until it reached the point where I said, it seems it is not the first time you are coming back late. It seems your brother always comes with you. Why does he have to do that? Until she admitted, and said teacher, he is not my brother. I think she was frightened that I was going to inform the parents. So she said, teacher, if you inform my parents, this is going to be the end of my education. They will not understand me. Please give me any punishment but do not inform my parents.

This passage reveals how Mrs. Ngosa closely monitored the student's behavior, noticed that she was late coming back to the school on Sundays, and plotted a way to catch her in the act. She sacrificed her own Sunday routine in order to meet the student in town, questioned the student several times to try to catch her contradicting herself, and then followed up with the parents to verify that the girl's story was false. Considering the daunting number of daily responsibilities juggled by school administrators in under-staffed, over-enrolled schools like this one, the time and attention the headmistress devoted to this case speaks of the stress she places on disciplining sexual conduct. The fact that this student (like the student who attempted suicide in the previous case) was afraid that if her parents found out, it would be "the end of her education" demonstrates the extent to which parents, as well as teachers, view schooling as largely a moral endeavor (see chapter 3 for a more thorough discussion of parents' role in this process).

When I interviewed him in 2010, Mr. Nyoni who had recently retired as headmaster of a government-run community day secondary school in a rural village about an hour away from Balaka, and come to teach at a Catholic school part time. He described the difficulties he faced at his previous post in making sure that the students at that school were not involved in sexual relationships. He would conduct "spot checks" twice per week, surveying the areas where students lived to check to see that they were not out with members of the opposite sex.

**Mr. Nyoni:** I remember, I had to talk to the head boys, actually we had a head boy and a head girl.<sup>15</sup> So I talked to them, since when they were away from the school, they were assisting me to monitor such type of relationships. But still I felt, since a head boy and head girl they are also part of the students, definitely sometimes they were hiding.

**MF:** So the head boy and head girl were supposed to monitor and see which students were involved?

**Mr. Nyoni:** Yes. And sometimes as a headmaster I was also supposed to make a spot check. At night, together with one of the teachers we had to move around. To the places where the students were staying.

**MF:** How often did this happen?

**Mr. Nyoni:** Twice a week.

**MF:** Twice a week you would go around at night?

**Mr. Nyoni:** Yes, me or some of the other teachers. And that's when we also discovered that maybe in the course of doing this we found boys and girls chatting somewhere during the night. Imagine. Yeah. So it was a difficult situation.

**MF:** And what did you do when you caught them chatting?

**Mr. Nyoni:** Definitely we brought them into the office, and often we also called the parents. Yeah.

Patrolling the area surrounding the school at night, this former headmaster, like Mrs. Ngosa, devoted considerable time outside of the normal school day to regulating students' sexual behavior. In asking students in leadership positions to monitor the sexual activities of their peers during the evening hours, Mr. Nyoni further emphasizes sexual restraint as an indicator and requisite driver of schooling success. When we keep in mind that this is not a boarding school and thus the teachers are not responsible for the safety of students in the off-hours, this story is particularly striking. A deputy headmaster at a secular private school also referenced using other students' reports to keep track of student sexual activity. He remarked that, "My strategy is that I use, I do get some trusted students, so I say, if you hear that someone has got a love affair around this school, inform me. And I won't reveal you. You just tell me. So we do plant spies amongst them."

Teachers also describe "discussing with their colleagues" students whom they suspect of being involved in a romantic relationship, to see whether any other teachers have suspicions about that student. Mr. Banda, a Chichewa teacher at a secular private school, described how such relationships are dealt with during staff meetings:

**Mr. Banda:** Yes. In most cases when we have staff meetings, we do look into the issue of relationships among students. We try to discover the couples, or pairs of these particular people, we call them pairings.

**MF:** How often does that happen, in each term?

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<sup>15</sup> This phrase refers to students selected by the teachers on the basis of model behavior and academic performance who take on a leadership role within the student body.

**Mr. Banda:** It depends on time, but at least twice per term. So first, we sit down, we write the names, then we have a procedure that we follow. We say, today, we need to call the following couple. So we call them, the pairings, then they come for counseling.

This passage indicates that figuring out which students have strayed from the path of abstinence is a key component of teachers' roles within the school. It is dealt with during each staff meeting at Mr. Banda's school.

Malawian teacher's emphasis on sexual interdiction extends beyond the punishment or prevention of *acts*: sexual *thoughts* must also be stamped out. At the district-level government boarding school, Mr. Chomba describes how he caught two students pasting pictures of men into their notebooks:

**Mr. Chomba:** At one time, it was like, there was an assembly, and so girls had a behavior of keeping pictures of newspapers, and paste them on their notebooks. Like celebrities or musicians, people they admire, they would put them there. So we feel like it is happening. They are spending time thinking about these things, when they are in the hostels, rather than focusing on their studies.

**MF:** So how did you find out that the students were doing this?

**Mr. Chomba:** The matron, when she was checking the dormitory, she noticed that there were pieces of pictures, and then she saw in their notebooks.

**MF:** So what happened to those students who were pasting the pictures?

**Mr. Chomba:** They were cautioned.

**MF:** What was told to them?

**Mr. Chomba:** They were stopped from doing that. It was announced during assembly that they have caught two girls doing this, and we feel like there are so many girls doing the same thing. They are spending time, instead of reading, instead of going to the classrooms to read, they are spending time in the hostel pasting pictures. So even after you go to the hostel, you have that on your mind.

Similarly, Mr. Nyoni describes how he found a student reading romantic novel, and used it as evidence that she was involved in a relationship:

**Mr. Nyoni:** I can remember... she had those headphones and she was listening to the radio, to show that she was changing her behavior, there was a change. And even in class, it is very easy to take note of such issues. You see her sleeping, she does not spend time studying, always thinking about this relationship. Yeah.

**MF:** ok. Was this student a boarder?

**Mr. Nyoni:** no, this student was a day scholar. And I remember one time I saw her even reading romantic novels. So this was also part of my evidence to the head. So after thorough investigations, is when we came to realize that she had a boy in college. Yeah. So maybe these are some of the issues that you can notice.

Taken together, the evidence presented in this section shows that (1) secondary school teachers in Balaka expect total sexual restraint among students and (2) they spend considerable time monitoring students and investigating potential cases of "immorality." Teachers view minor breaches of this moral code as placing students' entire futures in jeopardy. In this way,

schooling practice can be understood as a form of ascetic devotion; by remaining abstinent, students prove themselves worthy of the elevated status conveyed by an educational degree.

## **Education as Salvation: Schools as an Entry into a Transcendental Existence**

In this section, I explore the extent to which education is viewed as offering salvation, delivering youth from their village lives to a more sacred level of humanity. Among contemporary teachers, this model of schooling is primarily expressed when teachers describe schools as protecting students from “dangerous” elements of traditional culture. According to my respondents, these cultural traditions instruct students to have sex at an early age, pursue extramarital partners, and engage in other behaviors that threaten the staunch morality taught in schools.

Several teachers described tension between schooling and “traditional cultural practices.” They view the task of protecting students from initiation ceremonies, coming-of-age rituals, and similar events as part of their responsibility as teachers. They sought to accomplish this task both by physically keeping them away from their home village and by introducing them to a better way of life. Three different teachers complained that initiation ceremonies happen when students are “on holiday” and go back to their home villages. Teachers advise students against taking part in these ceremonies and ask them to tell their peers about the risks involved in participating in these events. As Mr. Kumbuyo, the AIDS club coordinator at the district-level secondary school describes,

**Mr. Kumbuyo:** When these young people go back from school in holidays they go for initiations. At the initiations they are told from here, when you go outside you have to remove dust by having sex with somebody.... So I say, the dangers, once you come from there, if you practice that, you are going to take HIV straight away. And you will destroy your future. And you, you should go home and teach your friends there that this practice nowadays is outdated.

Mr. Phiri, the deputy headmaster at a secular private school speaks of the responsibility that teachers have to “intervene” and prevent students from participating in traditional practices that encourage sexuality:

**Mr. Phiri:** Some of the tribes, they have very strange practices. In such a way that even the government has to intervene to discourage those practices... When the girl is mature, they take her to that, maybe you have heard about chinamwale.

**MF:** I’ve heard of it, but please tell me more.

**Mr. Phiri:** So they tell the girl, now you have grown, you are ready to get married, when she is still very young. And then, to show that this young girl is mature, now there are some special men who are supposed to sleep with the girl. That is part of the practice. Now, we teachers must intervene to say, no, no, no. It cannot be done.

By advising students against participating in traditional ceremonies and removing them from the village environment for most of the year, teachers seek to physically separate students from these elements of traditional culture. At the same time, they work to arm students with the skills and perspective needed to resist the influence of these ceremonies. Education is said

to have a transformative effect on the mind, which allows students to understand the risks involved with participating in such events. Mr. Kumbuyo recalls his own experience of attending a traditional initiation ceremony, but having the “mind” to “consider his school” and resist the call to have early sexual intercourse. As he describes it, his rejection of this piece of advice resulted in his being isolated from his peers.

**Mr. Kumbuyo:** Because even myself, I went through initiation. I was told this, but fortunately I had already by this time been to school. So when I went there for initiation, people were saying you have to go for *kuchasa fumbi*, and I said, what do you mean *kuchasa fumbi*? ...I had the mind to understand the risks there, and I said no, it is too early. I have to consider my school. So there was some sort of isolation, people were isolating me. I mean, the youngsters of my same age, they were isolating me.

Here, education is portrayed as directly saving youth from the “immoral” influence of these traditional ceremonies. By bringing people out of the village and into schools, teachers thus act as “prophets of ethical salvation” (Weber 1993:158).

### **THREE POTENTIAL SOURCES OF THE MODEL OF SCHOOLING AS ASCETIC DEVOTION**

In this section, I examine three potential sources of this moralistic understanding of schooling. First, I examine the position of international donors and NGOs, the institutions most likely to reflect the attitudes present in the “world culture” of international education. I argue that the ascetic approach to teaching deviates from messages circulating through international educational discourse, which advocate a recognition of students’ rights to privacy in their nonacademic lives, continued opportunities for schooling following a pregnancy, and a more open discussion of sexuality in schools. As I show through interview evidence, teachers view their disciplinary practices in *opposition* to reforms put in place by the Ministry of Education, which are in line with this global discourse.

Second, I explore whether this moralistic understanding of schooling is a result of the continued institutional linkages between religious organizations and schools in Malawi. To test this theory, I examine interviews I conducted with four Catholic-trained religious leaders—two nuns and two brothers, to see whether they display a stronger or weaker level of adherence to the model of ascetic devotion than do lay-trained teachers. I find that these four teachers uniformly advocate a less restrictive approach to discipline and demonstrate a more liberal attitude toward students’ sexuality than most other respondents, suggesting that the present-day Catholic Church—by far the most influential religious institution in the education sector today—is not the primary source of this model.

After showing that these two potential contemporary influences can not explain this moral focus on bodily restraint, I argue that the teachers’ focus on sexual interdiction instead reflects the cultural understanding of schooling as ascetic devotion that evolved out of mission schools. I offer historical evidence that the strict control of sexual impulses was a major goal of mission schools in Malawi, and compare language used to describe the goals of schools during the early

missionary days with contemporary passages discussing the same topics, showing that both are centered around developing the moral character of students.

### **Source One: “World Culture” Spread by International Donors and NGOs**

In this section, I show evidence—from Malawi and other developing countries—that donors and non-governmental organizations active in the field of international education have recently advocated for a more lax approach to disciplining student sexual behavior, in the name of gender equity and the protection of human rights. I explore three components of national education policy in Malawi, all receiving support from the international development community: the elimination of mandatory pregnancy testing in schools, a rule requiring that students be readmitted after they become pregnant and deliver a child, and instruction about the use of condoms. At the local level, teachers I interviewed perceive these policy changes as externally imposed threats to their ability to maintain high standards of moral discipline in secondary schools. This tension between national/international discourse and local practice suggests that the focus on moral discipline is *not* reflective of the “world culture” of education.

Eleven teachers I interviewed discussed how, in the past, schools would administer pregnancy tests to all female students when they returned from holiday break. Those students who tested positive were expelled from the school. Teachers viewed this practice as a way to deal with teachers’ inability to monitor student behavior during school holidays, undermining attempts to control the moral behavior of students. Mandatory pregnancy tests were banned during the 1990s, around the time when the government changed to the multiparty system. Among teachers I interviewed, this ban was viewed with suspicion, said to bring “too much freedom” to students and to lead to an increase in immoral behaviors. Here are a few examples of teachers’ discussions of this policy change:

**MF:** Can you tell me more about this issue of surprise pregnancy tests?

**Mr. Chiyembekezo:** Of course it was there in the past, some time back. But they stopped.

**MF:** When did they stop doing that?

**Mr. Chiyembekezo:** I can't remember the exact date but it was in the early 1990's, especially after this democracy. This multiparty system of government. It seems, we can say maybe there was too much freedom, I don't know.

**MF:** Too much what?

**Mr. Chiyembekezo:** Freedom, leaving people to do whatever they want. Yeah.

**MF:** So there was less supervision of that kind of thing after the democracy?

**Mr. Chiyembekezo:** Because before that, definitely, all of the girls were taken to the hospital. Especially when they were coming from the holidays. But that has stopped. Unless maybe, I remember here when they discovered that a student was pregnant, she was taken to the hospital for confirmation. But not necessarily taking all the girls. You wait until you notice some signs on that particular girl. Yes.

**Mrs. Ntondi:** Before, during the one party system, we would take all the girls to the hospital, for testing.

**MF:** Ok.

**Mrs. Ntondi:** Before this democracy.

**MF:** Before 1994?

**Mrs. Ntondi:** Yes, yes. It was possible then. But not nowadays, because if you do that, you are accused of like violating their rights. (Female home economics teacher at district secondary school)

**Mr. Nyoni:** Surprise pregnancy tests, yeah, in government schools, they happened quite often. Um, I know that they did that in order for them to have a check. It was happening in government schools...it helped to control the immoral behavior in girls, because they were afraid, if I am impregnated here, very soon I will be removed... Sometimes at schools what happens is that girls can get a pregnancy and be at the delivery stage without anybody knowing. So if there is no check, that girl may continue like that.

I was not able to find documentation of the policy change these teachers are referring to. However, the position that the Malawian government appears to have taken, of outlawing mandatory pregnancy tests, is consistent with attitudes of the international development community expressed in reaction to similar policies in other countries. In 2001, Human Rights Watch reported that virginity tests were being administered to female students in KwaZulu Natal, South Africa, as often as every three months. The report's authors condemned the practice, writing: "Virginity testing infringes on a girl child's right to privacy, is gender discrimination, and violates the right to bodily integrity. Human Rights Watch maintains that schools are especially inappropriate sites for virginity testing" (George and Finberg 2001:27). In 2009, a national policy in Sierra Leone offering students scholarships for passing "virginity tests" sparked controversy in the international community. Concern International, a prominent development organization, called the proposed program, "a gross violation of their human rights" (Michaud 2009). In 2010, a vocational school in Indonesia that required mandatory pregnancy tests for admission provoked an international uproar, with Amnesty International calling for an end to the policy, which, a spokeswoman said is "not only intrusive and degrading but plainly discriminatory, as nowhere are men or boys subjected to any equivalent form of 'moral' testing" (Amnesty International 2010).

The elimination of mandatory pregnancy tests is closely associated in teachers' minds with another policy change: a 1993 policy, announced by the Ministry of Education, guaranteeing readmission to female students following a pregnancy. According to a 2006 document outlining a minor revision to the policy, given to me by the headmaster of the district secondary school, girls who are found to be pregnant are required to submit a written statement announcing their intention to return to school and requesting that a space be held for them. They are then sent home for the duration of the pregnancy, and invited back to school at the beginning of the school year following the birth of their baby, "upon assurance of safe custody of the baby." The policy states that a boy who is responsible for the pregnancy of a schoolgirl must also withdraw for a year, but this measure is rarely enforced at the school level. This policy specifically addresses a student's right to *reenroll* in school a year after giving birth, and has no bearing on disciplinary procedures for punishing students found in sexual relationships; as the policy states:

"It must be stressed that this approach to the discipline of the boys and girls does not, under no circumstances whatsoever, constitute softening of the preventive measures/rules and

regulations schools have in place. School rules and regulations should continue to be enforced with the vigor that they deserve.”

The readmission policy has received strong support from the international NGO community. It was initially instituted as part of GABLE (Girls’ Attainment of Basic Literacy and Education), a USAID-supported program aimed at promoting gender equity through increasing access to primary education for girls. More recently, international organizations have supported programs supporting girls’ efforts to claim the rights they were guaranteed through the 1993 policy. From 1999-2009, USAID and Save the Children sponsored a program targeting 35,000 youth in Southern Malawi, with the aim of helping teenage mothers return to school- forming peer support groups and informing them about how to navigate the government’s readmission policy (Mayzel, Kachala, and Kerner 2009). From 2003 to 2006, CARE International, with funding from the United Kingdom’s Department for International Development, sponsored a similar program, advocating for girls to be readmitted after a pregnancy through interest groups and peer support networks (DFID 2008).

As with the elimination of mandatory pregnancy tests, many teachers view this readmission policy as an attempt to impose an external value system onto local schools, threatening their ability to enforce moral discipline among students; some (like the third teacher quoted below) take a more nuanced view:

**Mr. Nyoni:** There was more discipline before the democracy. But now, even in this democratic world, if you could just change the way the rules, there is need for some rules to be changed.... there is need for now to revise the rules in the secondary schools.

**MF:** So what changes would you make to the rules?

**Mr. Nyoni:** Now, the rules of the school, they should change the rules in the schools, now these rules should be in line with the changing of the world.

---later in same interview---

**MF:** So what about in terms of this issue we were talking about, of sexual relationships? Do you think that any of those rules need to be changed?

**Mr. Nyoni:** Yes. Because mmm. Now what I was saying, for example, hmm. Very difficult question. You see, there is this rule that says that a girl child can come back to school after being impregnated. She bears a child, and she should come back to school. Some of these things, these are now things which try to encourage these students to practice these immoral behaviors.

**MF:** Because they will have another chance?

**Mr. Nyoni:** They have another one. But in those days they did not have the chance of going back to school. So I don't know how we can revise these rules. But there is this rule of girl child coming back to school after being impregnated. It is now encouraging these relationships.

**MF:** Ok. So when a student becomes pregnant, what is the process that you go through?

**Mr. Mulenga:** Normally, I remember in the past there was a circular from the government, a letter from the Ministry of Education that discouraged the teachers from sending the girl away. Because now you need to be careful. Now we have these human rights. If you simply jump into it and say oh, you are pregnant, you might be in trouble. So you need time. Or you leave the girl, and maybe if the pregnancy is at an advanced state, then the girl will maybe decide to leave the



school. So you have to be careful. Yeah. You need to observe and give the girl a chance to go out of the school on her own. (AIDS club coordinator at public day school).

**Mr. Banda:** It seems the government is now encouraging students to come back after giving birth. Of course maybe in one way this is encouraging them to do that again, but definitely if you just leave it like that many girls will be out of school. But if you look at the other side, maybe it will also act as telling them to go on doing that since they know that they can come back and what, go to school. But definitely on the positive side is that they have a chance to continue schooling.

Teachers also expressed reservation about programs sponsored by the government and INGOs that attempt to teach students openly about the condom, as part of the famous “ABC campaign.” The following three passages demonstrate the suspicion that many teachers feel towards these programs:

**Mr. Kumbuyo:** Previously, we had someone who was working at the DC's [District Commissioner] office. That one went back to America. That one was a volunteer, and she was coming here every Thursday, if I'm not mistaken. And she was emphasizing the use of the condom. Ok?

**MF:** And what did you think about that?

**Mr. Kumbuyo:** I think the use of the condom, frankly speaking, that is.

**MF:** Yes, I want you to speak frankly.

**Mr. Kumbuyo:** To tell the students to use the condom, that is to encourage immorality among the students. Because they say I will not take AIDS, I will use the condom.. That situation, they are practicing this sex now and then, because they know they have got their what? Their condoms. So participation in the classes becomes low. It becomes like a habit to them, they can have girlfriends, boyfriends, knowing that they are going to use, what, the condom. You know, you use a condom today, you use a condom tomorrow, the next day are you going to use a condom? No, you will think of going straight, which is dangerous to students. So telling them to use a condom, I think it has got disadvantages in one way.- Balaka Secondary AIDS club coordinator

**MF:** Do you ever discuss condoms at all in your class?

**Mr. Dzingo:** No, we don't discuss much about that. Only I mention that there are two ways- condoms and abstaining. Because these students, when they go out there, they get the knowledge, and actually they are told about the use of the condoms. So here I tell them that these are the two ways, the use of condom and to abstain, but I encourage you, not to use this condom. (Chichewa teacher, small secular private school)

**MF:** Ok. So would you want to bring up the issue of condoms?

**Mrs. Mwanza:** Yeah, because it is there in the system now. We can't avoid talking about it. It is supposed to be talked about. But sometimes it depends on the way that you talk about it.

**MF:** What do you mean it is there in the system and it is supposed to be talked about?

**Mrs. Mwanza:** What I am trying to say is that once you talk about prevention, the first thing the girls mention is condoms. They have heard about it, seen it, they may have used it themselves. That is the first thing they want to talk about. So you must yourself talk about it. So after maybe you counsel them on it, is it 100% perfect? How can it help you?

These passages demonstrate that many secondary school teachers perceive government sex education programs as part of Western culture that exists “out there,” external to the schools. In their own teaching about sexuality, they advise students against embracing the messages they receive in support of condoms from other sources. They frame condoms as threats to the moral structure of the schools.

Taken together, the evidence presented in this section shows that the dominant curricular models circulating through “world culture” tend not to support a strong emphasis on enforcing sexual discipline. Teachers do not perceive themselves to be promoting a secularized culture when they enforce strict standards for moral behavior within schools. Instead, they view these liberalizing trends as threatening their ability to promote ascetic discipline within schools.

### **Source Two: Institutional Residues: The Role of Grant-Aided Schools**

In this section, I explore the possibility that the “schooling as ascetic devotion” model is linked to the continued role of Christian churches in schools through grant-aided schools, those operated jointly by the government and Christian churches. The vast majority of grant-aided schools in Malawi (and all grant-aided schools in Balaka) is run by the Roman Catholic Church; the Anglican Church and CCAP also own and operates a small number of grant-aided schools in other parts of the country. In this section, I show that the four teachers I interviewed who were members of Catholic religious orders- two brothers and two sisters- expressed more liberal views on sexual behavior among students than their counterparts who had been educated in secular Malawian institutions. While four interviews cannot definitively refute the possibility that Malawian teachers are reflecting the views of their current church sponsors, the fact that these Catholic religious are less committed to ascetic sexual discipline than teachers in government schools teachers strongly suggests that the “education as ascetic devotion” paradigm has sources other than current church influence.

Brother Chirwa, the boarding-master of a Catholic grant-aided school, who had attended seminary in South Africa, described how being attracted to people of the opposite sex is “normal” and can’t be avoided:

**MF:** What about this issue of sexual relationships in general? How do you discuss that with students?

**Brother Chirwa:** Um, I would talk about the way I approach the issue. For me, I have no problems that a boy can have a girlfriend a girl having a boyfriend. But what do they do in their relationship? That is more important. Because naturally a human being is a social being and we have, you know, different stages. We get attracted to, you know, other people. So you can’t avoid to say, well, don’t have a boyfriend or a girlfriend. They will still at one time or another they will still have one. But how do you prepare them to have that? You see, that is my concern. Whether you like it or not, one time or another they will be involved in a relationship, but how do they enter into such a relationship? You know, I tell them you can have friends. You work with girls and women. Now, can you keep running away from them? No you cannot.

The headmaster of this school, also a Brother, recalled a time when a student became ill with a sexually transmitted infection, and he was told to go and get it treated, without punishment:

**Brother Simbewe:** Like last year, we experienced one boy who got, you know, infected with these diseases. That means I know that from time to time, they do sneak. Yeah.

**MF:** So can you tell me what happened with that one boy?

**Brother Simbewe:** These are my boys. You know, normally every morning they need to come with the sick ones. I observe them. My boys, the way of moving and whatsoever. So this boy, his step before was this one (walks normally) but now I come like this (limps) you wonder, brother, what is wrong? He says, oh, there is a boil here. So you can invite him, saying, just be open. We just invited him, go to Banja la Mtsogolo (reproductive health clinic), there is no problem. It is not an academic thing.

**MF:** So he is now...

**Brother Simbewe:** Cured.

**MF:** I see. So, was there any kind of punishment for him, for having been sexually active?

**Brother Simbewe:** It was just a matter of guidance and counseling, we have two teachers who do that. And we invited the hospital personnel. They just need guidance and counseling really, not to hide those things. Yeah. And to see the consequences, the dangers of doing this before their time. Exactly.

Sister Lungu, a nun who teaches life skills at a small private school also displays a more liberal attitude towards students' sexuality. She describes how she encourages students to openly discuss their sexual experiences in the class, and answers their questions without punishing those who admit to having partners:

**Sister Lungu:** Yes, students are very free with me. I tell them that some of your questions related to your sex life, you are not able to ask to your other teachers, parents, or your friends. But here, you can come out with open discussion... I speak openly. I draw on the board diagrams, I say what is happening, how you grow, what happens emotionally, how we get attracted to boys, to girls, what is happening biologically, what is happening. I explain it to them. And I give them practical examples, so they come out with their own practical experience.

The fourth Catholic-trained teacher I interviewed was Sister Mwanza, a nun who worked as deputy headmistress at the Catholic girls' school. She described discussing with her students whether or not they should spend time with boys. While she emphasized that students should not be having sexual intercourse, she stated that it is "good and natural" for female students to have "friends that are boys," and that they can spend time alone with them, even in their house:

**Sister Mwanza:** Now when we discuss in that topic, I begin, we tell them it is good, healthy to have a friend who is a boy. Because for them when you talk about boyfriends, they associate it with sex. That is the problem actually, that is the knowledge they have. When you talk about boyfriend, it means a lover.

**MF:** So what do you mean by friend who is a boy? Is it romantic?

**Sister Mwanza:** No no no, not that. It is a friend who is a boy, it means I can relate with this one without engaging oneself in this sexual activity.

**MF:** So what type of engagement?

**Sister Mwanza:** Now the type of engagement it can be about school, about studies, but sometimes just normal chatting. Sometimes I tell them you can even visit a boy in his home. Sometimes you can spend time alone together.

A sample of four is by no means conclusive, but the attitudes expressed by the only teachers in my sample with formal ties to the Catholic Church - which owns far more schools than all other religious organizations combined - were without exception more liberal concerning sexuality than the views expressed by lay teachers. This is likely due to the fact that religious leaders trained within the Catholic Church are usually educated outside of Malawi, and therefore are more likely to encounter less restrictive and moralistic models of schooling. This evidence suggests that it is unlikely that the model of schooling as aesthetic devotion - achieved through the strict control of sexual thoughts and deeds - comes primarily from the influence of contemporary religious institutions.

### **Source Three: Missionary Residues: Schools as Sites of Moral Reconstruction**

After examining two other potential sources that might explain the strong emphasis on moral discipline found in local understandings of schooling success, I turn now to what I believe to be the most likely source of this cultural model: the enduring cultural residues of mission schools' focus on education as a means of moral reconstruction.

Mission schools, across all denominations, were extremely concerned with the morality of their recent converts, and attempted to instill in students a Victorian discipline that allowed for no shades of gray in matters of sexuality and morality. As Berman writes:

Despite wide divergence of theological interpretation, mission groups did occasionally find areas of consensus. One involved the interpersonal relations between the sexes. All groups—high churchmen or low, established church or dissenter, fundamentalist or orthodox—opposed any contact between boys and girls, finally and irrevocably (1974:535).

The moral control required of students in mission schools often transcended the expectations of Victorian culture in Europe. Missionaries were concerned not with upholding the cultural norms that they themselves had grown up in, but instead worked to construct an idealized society in the African bush, one that would come closer to fulfilling the standards of Christian discipline than the communities they left behind. As Ahlberg writes:

Missionaries who ran away from modern Western life, rejecting it as contradictory to their own values, thus sought to reconstruct in Africa a new Christian society clearly impracticable in Europe and America. In this sense, missionaries demanded a level of Christian conduct beyond what they had ever experienced among ordinary people at home (1994:228).

Berman's 1974 article on missionary history includes several excerpts from interviews with Africans educated at missions during the Victorian period. One of them, conducted with Josiah Tlou, a Rhodesian educated in Lutheran and Dutch Reformed churches, recalls the strong emphasis on segregating the sexes at both schools. As recounted in Berman:

Josiah Tlou remembers that the missionaries at his Lutheran school in Rhodesia "took a very dim view of contacts between boys and girls despite the fact that Manama [the school] was coeducational .... A boy caught writing to a girl, or vice versa, was severely punished." But the punishment by the Lutheran missionaries was mild compared with that meted out at the Dutch

Reformed Mission at Morgenster. The episode started when "one day a friend and I went to visit the girls at the nurses' training college. He was caught talking to a girl on duty and was reported to the principal, who immediately dismissed him from the college." (1974:536)

A historical account of an Anglican school in Mbereshe, Northern Rhodesia, also emphasizes the attention placed on morality, particularly encounters with people of the opposite sex. The article describes a daily routine that is rigidly divided along gender lines:

In church on Sundays, the boys and girls sat in the side-aisles, separated by the villagers in the nave. Activities such as gathering firewood were scheduled on different days for the two schools. All letters were opened by staff and could be confiscated. It appears that the district commissioner at Kawamba sometimes obliged [the headmistress of the girls' side] by having corporal punishment administered to young men found chatting with G.B.S. girls (Morrow 1986:69).

The aim of the school at Mbereshe was explicitly not academic, and teachers were concerned much more with discipline than academic success. As Morrow describes, "Punishment was not administered for academic shortcomings. In this sense the school was considered more as a moral than as an intellectual environment" (Morrow 1986:618). Indeed, the headmistress of the girls' side of the school, Mabel Shaw, is quoted as saying, "The aim of the school is not to produce girls who have reached a certain [academic] standard, indeed the aim of the school is not academic at all - it is both to enrich life in every possible way by building up Christian character" (Morrow 1986:627).

If we compare these descriptions of the aims of the Mbereshe School to the description by Mr. Chilungo, headmaster of a contemporary Malawian secular private school, in response to a question about the goals of his school, we can see that the aesthetic ideal of moral discipline survives within schools to this day.

**Mr. Chilungo:** Knowing the reality of our country that not all will be able to go to colleges or to get jobs. But whatever they will be doing, they will be doing it with a different mentality. A different mind, even, than the person who never went to school. So that in all the different areas, even like hygienically, how to take care of themselves. So also we try to see into those areas. Even spiritually. Sometimes we give them spiritual information. After a person has studied here, our desire is that the education that they have received from here, in the society where that person is going to be living, they will be like a source of bringing some good values which will develop the country, the people, something which can bring good life to the people.

He describes a goal of transforming his students in *mind* (producing a "different mentality"), *body* ("hygienically, how to take care of themselves"), and *spirit* (giving "spiritual information", bringing "good values"), and the way that this total transformation is to be enacted is through enforcing discipline of daily habits and closely monitoring students' behavior.

In accounts of missionaries in Malawi and neighboring countries, we can also see how mission teachers saw themselves as "prophets of ethical salvation," delivering students from magical

ritual ecstasy to individual ethical salvation. In her article about Mabel Shaw's mission school in Zambia, Morrow writes:

The school had a single term of ten months, from August to May, and the holiday was regarded by the female missionaries more as a time when victory had to be achieved over the fundamentally perilous village environment than as a period of recreation... Parents, said Shaw in 1930, "always beg me to keep their big girls through the holidays, and I do not agree, they must face the temptations of village life - and prove themselves once during the year" (Morrow 1986:63-64)<sup>16</sup>

These historical accounts reveal the same concern with the risk posed by the holidays as teachers in my interview sample revealed when they described their fear that students would be exposed to village life, resulting in sexual licentiousness.

In addition, Christian missionaries were extremely preoccupied with trying to banish traditional initiation ceremonies such as the *nyau* dance, a coming-of-age ritual for boys, and *chinamwali*, a ceremony for girls. Linden and Linden (1974:119) describe how tensions between Protestant and Catholic missions and local Chewa authorities over whether or not children should attend the *nyau* dance became increasingly intense during the early 1920s: "The *nyau* was immoral in the priests minds because of the sexual content of the songs, the appearance of naked dancers in the presence of women, and because they had reason to believe that there were instances of adultery taking place after the performances." In other words, the *nyau* was a threat because it encouraged sexual immorality. It was also perceived as a threat because local Chewa authorities used the *nyau* to try to convince parents to pull boys out of mission schools; in the early 1920s, the age of participation in the *nyau* ceremony was changed from mature adulthood to early adolescence, in what Linden and Linden (1974:121) describe as a "deliberate attack on mission schools." Stuart (1979) describes how Anglican missionaries in Southern Malawi in the early 1900s mocked traditional coming-of-age ceremonies, leading local authorities to resist attempts by the mission to expand and build new churches. He writes, "The teachers exposed *nyau* and *chinamwali* to the ridicule of their young students, which threatened both the situation of the headmen, and the transmission of Chewa culture" (Stuart 1979:61).

## CONCLUSION

In this paper, I have drawn from a combination of primary and secondary archival records and interviews with local secondary-school teachers to explore the local cultural understandings of

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<sup>16</sup> Similarly, a historical account of Protestant Mission Education in Northern Rhodesia describes mission teachers' concern with the potentially dangerous influence of village life and culture on the moral development of students:

Every central mission school was a boarding school. Students came from many out-station schools, some from great distances. Most missionaries believed that a separation from the evil influences of the village was beneficial to the students' intellectual and spiritual development (Ragsdale 1986:35).

education in Malawi. I highlighted points of friction between theories of a homogeneous, secular, and liberal “world culture” of schooling and observations of how education is understood and enacted at the level of the school. World culture theorists predict that teachers will emphasize cultivation over discipline and academics over moral teaching. In contrast, I find that teachers devote more time and effort to regulating sexuality than they do evaluating academic performance. School administrators seek to swiftly and harshly punish all moral transgressions, removing students who are discovered to be unworthy of being a student through expulsions and suspensions.

An informed reader might note that HIV/AIDS rhetoric is, for the most part, absent from this account. Malawi is considered a high HIV prevalence country, and 15% of adults aged 15-45 were infected in the Southern Region in 2010 (NSO-Macro 2011). Yet while AIDS was discussed in several interviews, even among the teachers who actively participated in HIV prevention programming, including life skills classes and AIDS clubs, the epidemic was often mentioned as an afterthought when discussing the consequences of sexuality for students, secondary to dropping out, “ruining your future,” and getting pregnant. While HIV-prevention coffers now support them, schools’ efforts to regulate the sexual behavior are enduring remnants of the missionary past, and the teachers I spoke to all attended schools where teachers had a similar fixation on sexual virtue long before the AIDS epidemic broke out in Malawi. The current crisis adds a sense of urgency to what has long been a fundamental element of local schooling practice, and AIDS is not the primary reason why sexual activity is so tightly regulated in schools. Even in the absence of a risk of imminent death, schools seek to instill strict moral discipline around sexuality because such discipline is fundamental to what it means to be educated in Malawi.

This overwhelming concern with the sexual propriety of students evinces a fundamentally different way of conceptualizing education. In Malawi, schools are not spaces for youth to learn how to think critically or to discover what they are passionate about. Instead, schools are sites where they are sculpted until they become virtuous, chaste, and modern. Teachers pursue the goal of transforming souls and bodies as well as minds through the rigid enforcement of a series of strict disciplinary standards. Through daily exercises in bodily restraint and passive listening, students learn to temper their passions and structure their behavior.

The religious undertones of education in Malawi also shape how schools are situated in relation to the broader community. Schools were introduced in Malawi to civilize Africans and expose them to Western values and customs. This posture vis-à-vis traditional culture remains a potent force in local understandings of educational practice to this day. Teachers seek to protect their students from the negative influences of their own culture, and those who resist dangerous initiation ceremonies are described as having the “mind” to say no. Schools promise to deliver those who remain devoted from a mundane present reality into an enlightened plane offering an expansive set of opportunities and populated by refined individuals.

These contemporary cultural understandings of education appear to be at odds both with global rhetoric around sex and education as well as the positions of Catholic religious leaders,

those most active in education in Malawi today. I argue that this model reflects neither the “world culture” of education nor the current institutional influence of the Catholic Church, but rather the historical legacies of the missionary foundation of formal schooling. Once we acknowledge that schools in Malawi were born out of evangelism, teachers’ singular preoccupation with disciplining sexual behavior begins to make more sense. Schooling in this context was and continues to be practiced as a form of ascetic devotion, a set of principles and guidelines through which teachers aim not only to impart knowledge and develop marketable skills, but to convert their students from untamed children into disciplined and honorable women.



# 3: SEX AND SCHOLASTIC SUCCESS: CULTURAL SCHEMAS AND DEMOGRAPHIC OUTCOMES

Across sub-Saharan Africa, keeping adolescents—especially girls—in school is widely touted as a panacea benefitting individuals, families, and communities. However, teachers and parents fear that this shared goal may be threatened by sexual relationships, believed to trigger a downward spiral of reduced ambition and competing allegiances resulting in students leaving school (Grant 2012; Wight et al. 2006). Reaching back to the missionary roots of schooling in the region, and augmented by abstinence-based sexual education programs, a thick line in the cultural imaginary demarcates educational endeavors from sexual thoughts, words, and deeds (Frye 2012; Poulin 2007b). Survey data suggest that sexual activity does indeed predict school exit for female students, though not for male students (Biddlecom et al. 2008; Clark and Mathur 2012).

A cultural opposition between sex and schooling can also be found in the United States, where popular opinion on the academic consequences of sexual behavior has shifted rightward in recent decades (Luker 2006). Schools across the country turned from the comprehensive sexual-education curricula of the 1980s towards abstinence-only policies, and the negative ramifications of adolescent sexuality achieved “a kind of natural cultural authority” during this period (Fine and McClelland 2006:299). Scholars have consistently documented a negative association between adolescent sexual activity and various schooling outcomes (McCarthy and Grodsky 2011; Sabia and Rees 2009; Schvaneveldt et al. 2001), and sexual relationships appear to be particularly consequential for female students’ educational trajectories (Crissey 2006).

I apply a combined culturalist and demographic approach to study the antinomy between sexual activity and scholastic success in Malawi. I examine how statistical associations between relationship status and educational outcomes are entwined with and to some extent explained by shared narratives opposing sex and schooling. This analysis reveals new insights into how cultural schemas, and the various ways people respond to and sustain them, constitute the demographic patterns that we observe using survey data.

In-depth interviews with teachers and students emphasize three mechanisms through which sexual relationships are believed to cause individuals to leave school: diminished academic

performance, poor attendance, and pregnancy.<sup>17</sup> Longitudinal survey data show that female students in sexual relationships are indeed considerably more likely to leave school; this association persists after controlling for selection on observed and unobserved characteristics. However, when the survey data are used to examine the three mechanisms that emerged from the qualitative sources, these pathways do not account for the observed association between having sex and leaving school.

Returning to the interviews, I argue that it is the cultural context itself that links sexual relationships with school leaving for female students. All students in my sample, along with their teachers and parents, make decisions within a normative environment that conjoins sex and school failure. Teachers' punitive actions result in youth leaving school before changes are detectable in their performance or behavior. Parents disinvest from students they believe are sexually active, leading to temporary or permanent departures from school. Students respond in contrasting ways: some enter into relationships as a socially-codified exit from school, while a high-achieving minority pursue "school positive" relationships constructed in opposition to the dominant model of relationships.

Statistical analyses also reveal strong gender differences: women (but not men) are more likely to leave school if they are in a relationship, while men (but not women) are more likely to be temporarily absent. Interview evidence shows that cultural narratives opposing sex and schooling are infused with broader understandings of gender and sexuality, specifically women's vulnerability and the irresistibility of sex. Female students are subject to special scrutiny and held to higher standards of sexual purity. In short, the cultural schema opposing sex and schooling is a prism through which individual-level perceptions and choices are refracted. Statistical patterns reflect the various ways that people attend to the shared meanings that surround them.

## **BACKGROUND ON SEX AND SCHOOLING IN AFRICA**

Research examining the associations between schooling and sexuality in sub-Saharan Africa has focused primarily on how educational experiences shape patterns of sexual behavior, demonstrating that in-school youth wait longer to become sexually active (e.g., Kaufman et al. 2004; Lloyd 2005; McGrath et al. 2009) are more likely to use condoms (e.g., Baker, Leon, and Collins 2010; Hargreaves et al. 2008). Recently, scholars have begun to look beyond enrollment status to examine how variation in educational experiences influences sexual behavior (Grant and Hallman 2008; Marteleto, Lam, and Ranchhod 2008).

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<sup>17</sup> Throughout this paper, "leaving school" refers to premature school departures, to be distinguished from *finishing* school, or leaving after having completed one's educational goals. Other scholars use the term "dropout" (Clark and Mathur 2012; Grant 2012). I agree with Fine (1991) that it is important to conceptually distinguish dropping out voluntarily from being "pushed out" or coerced to leave, for example due to family pressures or teachers' disciplinary actions. Because of the difficulty of fully disentangling voluntary versus involuntary factors, I use the general term "school leaving."

In contrast, the extent to which sexual experiences influence schooling trajectories remains relatively understudied, though some important exceptions exist. A cross-sectional analysis reveals that in three out of the four sub-Saharan African countries examined, female students who are sexually active are more likely to leave school; in Malawi, girls who had premarital sex face almost twice the odds of leaving before completing secondary school (Biddlecom et al. 2008). Detailed relationship-history data in Kenya show that having sex is associated with an increased risk of leaving school for female respondents (Clark and Mathur 2012). Neither study finds an increased risk of leaving school for males.

One aspect of the link between sexual behavior and later schooling outcomes that has been examined more thoroughly is the role of pregnancy in causing school exits among girls. While early research indicated that pregnancies were a primary cause of leaving school (Meekers and Ahmed 1999), recent evidence is more mixed. Using detailed life-history data from Cameroon, Eloundou-Enyegue (2004) finds that pregnancy-related dropouts constitute a significant proportion of the gender gap in schooling attainment: one third of all schooling exits among female secondary school students are attributable to pregnancy. In contrast, out of 243 female out-of-school youth Kenya, only four listed pregnancy as their reason for leaving school (Mensch et al. 2001). And an analysis of five francophone countries in Africa shows that pregnancy accounts for at most 10% of female school departures (Lloyd and Mensch 2008).

If quantitative analyses on this topic are scarce, the cultural model of sex endangering schooling outcomes is relatively well documented through qualitative studies (Frye 2012; Grant 2012; Munthali et al. 2006; Poulin 2007a; Stambach 2006; Wight et al. 2006). Wight et al. (2006) describe “pupil abstinence” as among the “most fundamental sexual norms” in Northern Tanzania. Using in-depth interviews with parents, Grant (2012) shows that pregnancy in particular looms large in the cultural imaginary of rural Malawi. Poulin (2007a:2391) describes how some female students in Malawi forswear dating altogether, citing concerns that boyfriends might “disturb their education.” And Frye (2012) theorizes that young women claim ambitious aspirations in part as a claim to the moral identity that comes with being a schoolgirl, one built around female purity and sexual restraint.

## **THEORIZING CULTURAL UNDERSTANDINGS OF POPULATION PROCESSES**

In examining shared meanings surrounding sex and schooling, I use the concept of cultural schemas, defined by Sewell (1992:7) as “generalizable procedures applied in the enactment/reproduction of social life,” including “conventions, recipes, scenarios, principles of action, and habits of speech and gesture.”<sup>18</sup> Cultural schemas influence how our minds simplify and store information (Strauss and Quinn 1997). People deploy cultural schemas as they

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<sup>18</sup> Johnson-Hanks et al. (2011:3) provide another helpful definition: cultural schemas are “the largely underdetermined, and often taken-for-granted, ways of perceiving and acting through which we make sense of the world and which motivate our actions.”

navigate social interactions and solve problems (Becker 1999); they make decisions (Johnson-Hanks 2002) and fashion their lives (Frye 2012) in accordance with them.

As I will show, teachers and students both speak of relationships as causing students to leave school through a small stock of stories, each describing processes and events that render students unfit to stay in school. These narratives pervade despite the lack of evidence that these intermediary factors help to explain the documented associations between sexual relationships and leaving school. When exploring the persistence of these cautionary tales, I build upon theories of collective narratives (Abolafia 2010; Bruner 1991; Ewick and Silbey 2003; Polletta et al. 2011). Rather than being shaped by statistical *generalities*, our subjective understanding of the social world is largely informed by narrative *particularities*: our own pasts, the experiences of specific friends or relatives, gossip overheard about neighbors or coworkers (Ewick and Silbey 2003; Shore 1998). This is particularly true when we grapple with issues that are morality-laden (Bruner 1991; Wuthnow 2002). These narratives follow a logic that is distinct from that of statistical analyses; as Bruner writes:

We organize our experience and our memory of human happenings mainly in the form of narrative—stories, excuses, myths, reasons for doing and not doing, and so on. Unlike the construction generated by logical and scientific procedures that can be weeded out by falsification, narrative constructions can only achieve verisimilitude. Narratives, then, are a version of reality whose acceptability is governed by convention and ‘narrative necessity’ rather than by empirical verification and logical requiredness” (1991:4).

Specifically, the logic underlying the cultural schema opposing sex and schooling is grounded in the idea that academic and behavioral changes are essential consequences of sexual relationships, inevitably making students leave school. I argue that the widespread belief in the necessity of this logic, and the array of actions that are motivated and informed by this belief, have real consequences for the educational trajectories of female students in Malawi.

When considering the extent to which cultural understandings of sex and schooling are moralized, I build on the concept of moral panics, defined as episodes when “a condition, episode, person, or group of persons emerges to become defined as a threat to societal values and interests” (Cohen 1972:1).<sup>19</sup> Recent work has examined moral panics that coalesce around issues of reproduction and sexuality; these “sexual panics” “reveal a flaw in the personal sexual morality (premarital intercourse, masturbation, unintended pregnancy, abortion, homosexuality, and prostitution) of individuals,” and “fuel anger as a general process of forming collective narratives and cultural

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<sup>19</sup> The concept of moral panic refers to a cultural anxiety that is episodic, emerging or worsening during an isolated period of time. I have no way of verifying whether concern over the sexual behavior of students has become more extreme in recent years. Indeed, evidence suggests that teachers and education officials have been concerned with the sexual behavior of students since the inception of modern schools in Africa (Banda 1982). However, older teachers described this issue as one that has gotten worse recently. “Western culture,” “technology,” “human rights,” “democracy,” and “HIV/AIDS” are described as inciting a shift towards “too much freedom and not enough responsibility,” resulting in more students falling prey to sexual impulses (see also Englund 2006). Regardless of whether it truly constitutes an emergent social crisis, contemporary anxiety over the sexual behavior of students is perceived in this way, and thus I find moral panic to be a helpful theoretical tool.

scripts” (Herdt 2009:26–27). I turn particular attention to how individuals actively respond to the panic surrounding the sexual behavior of students. As Irvine (2009:237) writes, “collective activity is an important level of analysis in sex panics, although an emphasis on structural factors has obscured its significance... The sex panic public, miscast as singular, is often internally fractured.” By examining the ways that members of this fractured public attend to the cultural schema opposing sex and schooling, I hope to add to our understanding of how sexual panics are sustained by assemblages of actions.

Recently, researchers have sought to understand how population dynamics are patterned by shared cultural schemas (Allendorf 2013; Johnson-Hanks 2002; Johnson-Hanks et al. 2011; Morgan 2011; Thornton 2005; Watkins 2000). Central to this work is the theory of conjunctural action, which posits that the processes that social demographers study are the product of social actions shaped by *structures* (composed of cultural schemas and social resources) and *contingencies* (periods when schemas advance or recede in relevance or when new resources emerge) (Johnson-Hanks et al. 2011). This theory offers a fresh alternative to the classical view of population processes as reflecting independent rational-choice decision-makers (Thornton 2005). Crucially for my project, conjunctural action provides a framework for connecting cultural schemas with aggregate-level trends beyond considering their impact on the “preferences” of survey respondents. Cultural schemas determine the situations people find themselves in, the options they imagine possible, and the ways that others intervene into their lives. “Causal properties operate at multiple levels” and population dynamics cannot be understood as the simple aggregation of individual-level covariates, but rather reflect the convergence of individual cognitive processes, shared cultural narratives, and emergent social interactions (Johnson-Hanks et al. 2011:25).

## STUDY CONTEXT

Throughout sub-Saharan Africa, patterns of educational attainment and adolescent sexual activity have changed rapidly in recent decades: youth now stay in school longer and more sexual debuts occur outside of marriage (Mensch, Grant, and Blanc 2006). These demographic shifts are intricately linked: increasing educational attainment delays marriage (Blanc and Way 1998; Herman et al. 2011; Mensch et al. 2006) and the decline in early marriage means that more adolescents can remain enrolled in school (Lloyd 2005).

Malawi in particular has experienced dramatic changes in both domains. In 1994, Malawi became the first country in sub-Saharan Africa to abolish primary-school fees; the total number of students registered in primary schools increased from 1.9 million in 1993 to 3.1 million in 1994 (Al-Samarrai and Zaman 2007). Although attrition remains alarmingly high (Frye 2012), enrollment has increased substantially for adolescents as well since this policy was enacted: between 1992 and 2010, the proportion enrolled in school rose from 66% to 90% for youth aged 10-15 and from 36% to 51% for those aged 16-20 (NSO-Macro 1994, 2011).<sup>20</sup> The timing and context of first sex has changed as

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<sup>20</sup> Analyses not shown, but the Demographic and Health Survey (DHS) data are available to download free of cost at <http://www.measuredhs.com>. Estimates are weighted to be nationally representative.

well. Malawian youth are substantially more likely to experience first sexual intercourse outside of marriage than were previous generations (Mensch et al. 2006). Youth are also waiting longer to have sex: between 2000 and 2010, the median age at first sex for young adults aged 25-29 increased by about a third of a year for both genders and the proportion aged 15-19 who reported never having sex rose from 43% to 56% for women and from 39% 46% for men (NSO-Macro 2001, 2011).<sup>21</sup>

This study is located in the southern region of Malawi, where HIV/AIDS prevalence is highest; about 15% of the population aged 15-49 in the southern region was infected as of 2010, compared to 8% in the central region (NSO-Macro 2011). Southern Malawi has also historically experienced lower levels of educational investment compared with the other two regions (UNESCO 2008b). Many areas of this region are majority Yao, a predominantly Muslim ethnic group that was relatively unaffected by Christian missions, who provided all education until the 1960s and continue to fund and oversee a large proportion of schools (Banda 1982; Salanjira 2009). As Kendall (2007:299) describes, this weak historical presence of schools in Southern Malawi led families and students to respond with less interest to the 1994 policy and to view schools as peripheral to their lives.

The data were collected in Balaka, a rapidly growing peri-urban community and major transportation hub between the cities of Blantyre and Lilongwe. Balaka is distinct from most areas of the Southern Region in its longer history of local engagement with formal education. Balaka itself is predominantly Christian, and has experienced several decades of intervention by multiple Catholic missions. As the district capital, Balaka houses an elite government secondary school and is therefore a primary destination for local high-achieving youth.

## **ANALYTIC APPROACH**

### **Data Sources**

This article uses data from Tsogolo la Thanzi (TLT, Chichewa for “Health in Future”), a longitudinal survey that ran from 2009 until 2012.<sup>22</sup> TLT was designed to study how young people navigate the transition to adulthood in the midst of an AIDS epidemic, and followed a random sample comprised of 1,504 women and 552 men aged 15-25. Respondents reported every four months for follow-up, allowing for an in-depth look at how relationship dynamics and schooling trajectories unfold over time (see Appendix 1 Table A1 for details about survey timing and attrition).

The analytic sample is limited to respondents who were in school at the beginning of the survey

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<sup>21</sup> The upward trend in at first sex has elsewhere been attributed to increasing secondary education, HIV prevention programs, and rural to urban migration (Tenkorang, Rajulton, and Maticka-Tyndale 2009; Zaba 2004).

<sup>22</sup> TLT is designed by Jenny Trinitapoli and Sara Yeatman and funded by a grant (R01- HD058366) from the National Institute of Child Health and Human Development. For more information, visit <https://projects.pop.psu.edu/tlt>.

(N=843).<sup>23</sup> I examine four different educational outcomes: leaving school, absenteeism, school performance, and pregnancy, and rely on slightly different subsamples for each type of analysis (see Appendix 1 Table A2 for an overview of the exclusion criteria and descriptive statistics). Most of this variation is due to differences in the survey waves from which the variables of interest were drawn; attrition and school leaving reduce the sample in predictable ways. For the analyses predicting leaving school, to ensure that I am capturing premature school-attrition rather than timely school-completion, I also exclude those who began the survey in their final year of secondary school (N=84).

The in-depth interviews were designed to complement the survey data, and include 38 interviews with secondary school teachers from seven schools that respondents attend, collected in 2009, and 57 interviews with in-school and recently out-of-school survey respondents, collected in 2011. I conducted the teacher interviews in English, and transcribed each interview shortly after it was completed. At each school, I interviewed the headmaster, the deputy headmaster, the life skills teacher, and up to three other teachers. 28 teachers were interviewed, with 10 follow-up interviews, totaling 38 interviews. The youth interviews were conducted in Chichewa, the dominant language spoken in Balaka, by a team of four Malawian interviewers. Youth respondents were selected from a stratified sample based on their responses to questions about educational experiences, targeting respondents who were still in school (N=24) and those who left school during the year preceding the in-depth interview (N=33). The adolescent sub-sample includes 30 female and 27 male respondents.

## **Qualitative Data Analysis**

In analyzing the qualitative data, I first focused on the salient mechanisms through which sexual relationships are believed negatively impact educational outcomes. I read all interviews at least three times, and coded them using the Atlas.ti qualitative coding software platform. I began by coding all sections discussing either sexual relationships or schooling experiences, generating a preliminary list of general themes. I then read these coded passages again with the intention of identifying a set of the most salient narratives linking sexual relationships and educational trajectories.

I later returned to the interviews to help elucidate the major findings from the survey data. This time, rather than paying attention to the narratives explaining how relationships generally affect educational outcomes, I looked for descriptions of individuals engaging with or responding to these narratives. I read the interview transcripts several times and coded all descriptions of relevant actions by teachers, parents, and students. I then selected textual examples reflecting the most typical patterns of behavior. Anonymized interview transcripts and a detailed coding scheme are

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<sup>23</sup> In so doing, I am selecting on those who remained in school past age 15. While these findings should not be generalized to the entire population of Balaka, this narrow focus is substantively appropriate for the research questions examined here. Youth who remain in school through their later teens are a growing proportion of the population in Malawi, and it is this group for whom the antinomy between sex and schooling poses the greatest challenges.

available upon request.

## Statistical Analysis

I begin my examination of the survey data with bivariate analyses to determine whether respondents who are in a sexual relationship are indeed more likely to leave school. I then explore whether these patterns remain after controlling for selection using fixed-effects and propensity-score models. To examine whether the mechanisms emphasized in the interviews account for the associations between relationships and leaving school, I again combine bivariate and multivariate approaches.

Fixed-effects models are useful when examining the consequences of events as they unfold over time, because they use each individual as her own control, comparing her likelihood of experiencing an event at one time under one set of conditions (i.e. when she is *not* in a sexual relationship) with the her likelihood of experiencing the event at another time under a different set of conditions (when she *is* in a relationship).<sup>24</sup> Because they compare observations over time for the same individual rather than focusing on differences between individuals, fixed-effects models control for both observed and unobserved factors, as long as they don't change over time (Allison 1994, see Appendix 2 for more information regarding the regression equations). Leaving school is a non-repeated event and should therefore be modeled using survival analysis.<sup>25</sup> I examine school exits over time using the "case-time-control" method, which allows one to include variables that change monotonically over time using the fixed-effects approach (Allison and Christakis 2006). This method takes advantage of the symmetry of odds ratios for dichotomous variables in conditional logistic regression models, and involves reversing the dependent and main independent variable of interest (Allison 2009).

Fixed-effects models present some limitations, however. First, unobserved factors that change over time are still a concern. Second, this approach renders researchers unable to examine variables that remain constant over time. Third, respondents who experience no change in the outcome are removed from the sample. For the models predicting leaving school, this reduction in sample size is substantial. For this reason, I complement my analysis of this outcome with a propensity score model examining the effect of being in a relationship at wave one on leaving school between waves one and six.

Propensity scores are used in observational studies to approximate the experimental ideal: two groups that are identical in terms of measurable covariates but differ in terms of their relationship status (Morgan and Winship 2007).<sup>26</sup> The propensity scores are generated using the inverse

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<sup>24</sup> Fixed-effects models are presented here in preference to random-effects models because the random effects models did not pass the Hausman test of the independence of unobserved individual-specific effects.

<sup>25</sup> While leaving, going back to school, and then leaving again is possible, this pattern was not observed in these data.

<sup>26</sup> The propensity-score weighting removes all statistically significant differences between the treatment and control groups in terms of all covariates (tables available upon request).



conditional probabilities from a logistic regression model predicting sexual relationship status (Lunceford and Davidian 2004). The “doubly-robust” approach includes the propensity scores and the regression model in the same estimator, and has been shown to offer a more efficient strategy than earlier propensity-score approaches (Bang and Robins 2005; for equations, see Appendix 2).<sup>27</sup>

Doubly-robust models adjust for confounding due to measured covariates, but they still suffer from the problem of unobserved variable bias. Unlike for the fixed-effects models, both time-varying and stable characteristics omitted from the regression equations could bias the results.

## Key Variables Used

To examine school leaving, I use the question “*Are you currently enrolled in school?*” which is asked at each wave of the survey.<sup>28</sup> For absenteeism, I use “*Were you absent from school any days last week?*”; also asked at each wave. To examine school performance, I use two measures: self-reported end-of-year examination scores for mathematics and English, collected during wave four, and a more general question, asked in all waves: “*In the last four months, did you have trouble in school?*”

The dichotomous measure of relationship status used here distinguishes between students reporting at least one current sexual partner and those who do not report any current sexual partners. I also conducted the same set of analyses using two alternative specifications: the first is more restrictive and considers only respondents who report having a *committed* sexual partner, and the second is less restrictive and includes all current romantic partners, whether sexual or nonsexual. The basic findings were the same, though including nonsexual romantic partners tended to dilute the significance of the effects (results available upon request).

I chose the measure comparing “any sexual relationship” to “no sexual relationship” for three reasons. First, the interviews show that concerns about the effects of relationships on schooling outcomes primarily target *sexual* relationships. Second, bivariate analyses indicate that respondents with nonsexual romantic partners are more similar in terms of educational outcomes to single students than to those reporting sexual partnerships (see Appendix 1 table A3; see also Clark and Mathur 2012). And third, examining the relationship trajectories reported by those who classify their relationships as nonsexual reveals that these partnerships rarely evolve into sexual relationships; instead they tend to either end or remain nonsexual.<sup>29</sup> While few studies have

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<sup>27</sup> Following advice from Morgan and Harding (2006), I tried several other matching techniques, including nearest neighbor ( $n=5$ ), radius ( $r=0.05$ ), and kernel (Gaussian and Epanechnikov). The results did not change substantively depending on matching algorithm used.

<sup>28</sup> For more details regarding the wording of any question used in the survey, please contact the author or refer to the TLT project website (endnote 5).

<sup>29</sup> I examined all observations for which a respondent reported being in a nonsexual relationship at one wave and was asked about her relationship status during the next wave ( $N= 203$  female, 101 male). In the majority of these cases, the relationship had terminated by the next wave, and the respondent was recorded as single (67% for female respondents, 68% for male respondents). About 18% for both genders remained coded as nonsexual relationships in the following

examined nonsexual relationships among adolescents in this context, it seems that rather than marking a preliminary *moment* in a relationship destined to become sexual, nonsexual relationships are a different *genre* of partnerships.

The fixed-effects models control for the following time-variant measures: socioeconomic status,<sup>30</sup> year in school,<sup>31</sup> employment status, the respondent's estimated likelihood of remaining in school, and whether the respondent experienced difficulty paying school fees and/or declining health in the four months prior to being interviewed. The doubly-robust models control for socio-economic status, age, level in school, respondents' satisfaction with her current schooling level, and two measures of expectations for future educational attainment.

I estimate all models separately for male and female respondents, for both substantive and statistical reasons. Substantively, adolescent sexuality is fundamentally gendered, and we can expect relationships to have different effects for male versus female students. Statistically, scholars have raised concerns about interpreting interaction terms in logit models (Ai and Norton 2003; Long and Freese 2006), particularly for fixed-effects and other panel models (Karaca-Mandic, Norton, and Dowd 2011).

## RESULTS

### Overview of the Cultural Schema Linking Sexual Relationships and Leaving School

When describing how sexual relationships threaten scholastic success, interview respondents repeatedly emphasize how sexual activity inevitably triggers negative changes in students' behavior or abilities and renders them unfit to be students. This schema was evoked through a stock of three narratives, all echoing a common refrain: that being in a relationship inevitably leads students to leave school before reaching their goals. The three narratives refer to different mechanisms through which relationships "ruin" schooling trajectories: increased absenteeism, poor school performance, and pregnancy. Here, I briefly describe how respondents described each of these three mechanisms before turning to the quantitative data. A more thorough examination of the interview data follows.

The first pathway through which sexual relationships are commonly described as leading to school leaving is absenteeism. Since many students live with relatives who forbid sexual relationships, class time is often described as the best opportunity to spend time with a partner. Several teachers mentioned noticing that two students were often absent on the same day as one way of detecting

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wave, and only a minority—15% for female respondents and 14% for male respondents—reported being in a sexual relationship during the next wave.

<sup>30</sup> For each wave, an index was constructed using principal components analysis of a list of 20 household goods, personal possessions, and housing attributes.

<sup>31</sup> The Malawian education system consists of 8 years of primary school (Standard 1-8) and 4 years of secondary school (Form 1-4).

relationships. As Mr. Banda<sup>32</sup>, a composition teacher at a small private school, describes:

**Mr. Banda:** They may decide not to be in class for some time, going out for other issues with their boyfriend. And we keep observing this particular behavior continues, and sometimes we can notice that this girl is always absent from class on the same days as this boy, and then we suspect that something is happening.

Students also mentioned missing class as one way that relationships affect educational experiences. For example, Hastings, an 18-year-old who recently left secondary school, describes why he decided to end a past relationship: “During school time I would often go away while my friends were in class, so this disturbed my education.”

The second way that sexual relationships are described as causing students to leave school is through distracting thoughts affecting academic performance, often expressed by teachers in terms of a fundamental biological incompatibility between education and romantic love. Mr. Chomba, an English teacher at a large government school, states:

**Mr. Chomba:** At this age, being the secondary school student, we must tell them to wait. Because we know that when you mix the two, one thing will definitely suffer, especially their studies. Now at this age, with their bodies still developing, they are not yet able to balance between the studies and the love relationship. And they don’t have control over their sexual impulses, their brain cannot handle studying and the love ideas at the same time.

This belief that sexual partners muddy concentration and lower academic performance was also expressed during interviews with school-aged youth. Gloria, a 16-year-old who left in the first year of secondary school, explains in language typical of many other respondents how being distracted by a relationship caused her to fail her end-of-year examinations (and eventually drop out):

**Gloria:** When I was in class, I didn’t have thoughts as if I am in class. I was only having thoughts about my boyfriend, and even when we were writing, or for me to pay attention to what the teacher was teaching was impossible because I was busy thinking about him.

The third way that sexual relationships are said to detrimentally affect schooling outcomes is through pregnancy leading girls to leave school. Teachers in Malawi spend considerable energy monitoring students for potential pregnancy cases. When a case of suspected pregnancy occurs, the student is taken to the hospital for a pregnancy test, and if found positive, she is asked to leave school immediately. Although a nationwide policy requires schools to allow students to return a year after giving birth, teachers and students both report that few students do. Tawonga, an 18-year-old who became pregnant during her first year of secondary school, describes her experience:

**Tawonga:** It did not take much time for the relationship to reach its maximum point, the point of no return, when we started having sex together, and that is when I got pregnant and now I can see that the advice [my sister] gave was true. I have disturbed my education, and even

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<sup>32</sup> All interview respondents quoted are given pseudonyms from a list of common Malawian names; the same pseudonyms are used throughout this dissertation.

though my mother agreed to watch the baby, my brother has refused to pay for my school fees again, saying that he can't trust me and maybe it will happen again.

While Tawonga describes her mother and teachers encouraging her to return to school, her brother refused to pay her fees, and as a result she remained out of school.

## The Statistical Association Between Sexual Relationships and Leaving School

I begin my analysis of the survey data by examining whether students who are in a sexual relationship are more likely to leave school. Table 1 presents the results of a bivariate comparison of rates of leaving school by relationship status. This difference is significant for both genders but is much larger for women; while only five percent of the person-waves in which female respondents report being single are followed by a school exit in the subsequent wave, this proportion is over twenty percent when female students report relationships. For males, these proportions are five and eight percent, respectively.

**Table 1: Schooling Outcomes by Sexual Relationship Status**

	Female		Male	
	Single	In Relationship	Single	In Relationship
Leaving School <sup>a</sup> (%, Person-waves at risk)	5%***	22%***	5%*	8%*
Absent from School <sup>b</sup> (%, Person-waves)	30%†	33%†	30%***	40%***
Mean Test Score (s.d.) <sup>a</sup>				
English	54.19 (15.30)	52.17 (16.27)	55.01 (14.24)	54.77 (19.30)
Math	48.53 (17.46)	44.18 (16.69)	53.21 (19.95)	57.04 (17.16)
Trouble in School <sup>a</sup> (%, Person-waves)	36%	40%	25%	23%
N (at wave 1)	377	95	199	88

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001; stars indicate significance using a one-tailed t-test.

<sup>a</sup> Relationship status is lagged one wave.

<sup>b</sup> Because the absence variable specifically refers to the week immediately preceding the survey interview, relationship status is measured at the same wave as absence (not lagged).

I compare the association between relationship trajectories and leaving school in more detail in Table 2. This table shows that students who begin the survey period in a relationship are more likely to leave school by the end of the study period two years later; this comparison is particularly striking for female students. This table also shows that having a relationship while in school is an unstable status—most students do not remain in this category four months later, but either end their relationship (the most common pathway) or leave school.

**Table 2: Schooling and Relationship Transitions, Waves 1-6**

Origin State (Wave 1)	Destination State	Wave 2	Wave 4	Wave 6
<b>FEMALE</b>				
<b>In school, Single</b> N=377	In school, single	92%	84%	60%
	In school, in relationship	6%	6%	9%
	Out of school, single	0%	3%	15%
	Out of school, in relationship	1%	7%	16%
	Total	100%	100%	100%
	Attrition	16	19	25
<b>In school, In Relationship</b> N=95	In school, single	54%	34%	23%
	In school, in relationship	38%	24%	14%
	Out of school, single	4%	11%	14%
	Out of school, in relationship	4%	31%	50%
	Total	100%	100%	100%
	Attrition	8	2	5
<b>MALE</b>				
<b>In school, Single</b> N=199	In school, single	87%	80%	67%
	In school, in relationship	9%	8%	9%
	Out of school, single	3%	9%	21%
	Out of school, in relationship	1%	2%	3%
	Total	100%	100%	100%
	Attrition	4	12	7
<b>In school, In Relationship</b> N=88	In school, single	48%	64%	43%
	In school, in relationship	45%	25%	23%
	Out of school, single	4%	6%	19%
	Out of school, in relationship	3%	5%	16%
	Total	100%	100%	100%
	Attrition	5	3	5

Notes: Respondents who previously attrited from the sample are not included in the proportions for each wave.

**Table 3: Case-Time-Control and Doubly-Robust Propensity Score Models Predicting Leaving School**

	Female	Male
<b>Case-Time Control Models <sup>a</sup></b>	OR/(se)	OR/(se)
<b>(Fixed-Effects for Nonrepeatable Events)</b>	(1)	(3)
Respondent was in a sexual relationship	3.63 (1.16)***	1.69 (0.79)
Observations (Respondents)	648 (127)	598 (109)
<b>Doubly-Robust Propensity Score Models <sup>b</sup></b>		
Predicted probability of leaving school if no respondents were in a relationship at wave 1	0.27	0.18
Predicted probability of leaving school if all respondents were in a relationship at wave 1	0.49	0.24
Difference in predicted probabilities (estimate of effect size of sexual relationship status on leaving school)	0.22 (0.07)**	0.06 (0.06)
<i>N</i>	384	246

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001.

<sup>a</sup> The case-time-control models include the following time-variant covariates (described in Appendix 1, Table A5): socio-economic status, current year in school, difficulty paying school fees, declining health, educational expectations, employment status, and dummy variables indicating survey wave. All independent variables are lagged by one survey wave.

<sup>b</sup> The doubly-robust models account for the following covariates (described in Appendix 1 Table A5): age, socioeconomic status, current level of school, and attitudes and expectations related to education. These covariates were all used to estimate both the propensity scores and the outcome model, and were measured at wave one.

Table 3 shows the results of case-time-control models exploring how changes in relationship status and other time-varying characteristics predict leaving school. Women are highly significantly more likely to leave school after entering into a relationship ( $p < 0.001$ ); for men, there is no significant association between changes in relationship status and leaving school. The results of the doubly-robust models, presented in the bottom panel of Table 3, largely confirm the findings from the fixed-effects models. With all variables included, female respondents who were in a relationship in wave 1 are 22% more likely to end the observation period out of school ( $p < 0.01$ ). The second column shows no significant effect of being in a relationship for male students.

When we compare the results of the doubly-robust models to the descriptive statistics from Table 2, we can determine the degree to which the difference in likelihood of leaving school between students who begin the study with a sexual partner and those who do not is attributable to selection on the characteristics included in the propensity score models. Table 2 shows that women who begin the study in a sexual relationship are 33% more likely to leave school by wave six compared with those who begin the study with no sexual partner. When we examine the predicted probabilities in Table 3, this difference in the probability of leaving school is reduced to 22%, an attenuation of one third. For men, Table 2 shows that men reporting sexual partners at wave one are 11% more likely to leave school with no adjustment for selection; this difference in probability is reduced to 6% in Table 3, an attenuation of 45%. These comparisons tell us that selection on the characteristics included in the doubly-robust models accounts for some but not all of the association between relationship status and school leaving for women observed in the transition probabilities in Table 2.

### **Quantitative Analysis of the Three Mechanisms**

In this section, I examine each mechanism through which interview respondents believe relationships lead to schooling exits: increased absenteeism, lowered school performance, and pregnancy. For absenteeism and school performance, I explore whether students who are in a relationship are more likely to experience these outcomes than single students, and then examine whether these variables mediate the association between relationship status and leaving school. For pregnancy, because students who are in a relationship are necessarily more likely to become pregnant than are single students, I pursue a different approach. I examine the proportion of premature school departures that are attributed to pregnancy, and then examine whether the association between relationship status and leaving school remains when respondents who experienced a pregnancy are removed from the sample.

I begin by exploring whether respondents in a relationship are more likely to be absent from school. The second row of Table 1 shows that male students with sexual partners are significantly more likely to report having been absent from school ( $p < 0.001$ ). Forty percent of the time, male students who report being in a relationship missed school in the previous week, while for single males this is true only thirty percent of the time. Among female students this difference is only three percent and is marginally significant ( $p < 0.10$ ).

Next, I test whether this association remains after adjusting for selection using fixed-effects models (presented in Table 4). The findings again differ by gender: men who enter into a sexual relationship face one and a half times the odds of being absent from school in the following wave ( $p < 0.05$ ), while there is no documented association between changes in sexual relationship status and reported school absence for women. The other mechanism that appears to contribute to absenteeism for male respondents is lack of money; having trouble paying school fees is associated with a 1.4 increase in the odds of being absent and a standard-deviation change in the household-goods index is associated with a 1.2 increase in odds; both of these measures are marginally significant ( $p < 0.1$ ). These results may reflect male students missing school to pursue short-term jobs, or being sent home due to lack of school fees.

**Table 4: Fixed Effects Time Series Logistic Regression Models Predicting School Absence, Waves 2-6**

	School absence during week preceding interview <sup>a</sup>	
	Female OR (se)	Male OR (se)
Respondent was in a sexual relationship	0.97 (0.19)	1.51 (0.30)*
Socio-economic Status	1.03 (0.06)	1.17 (0.10)†
Current Year in School	1.02 (0.08)	1.06 (0.11)
Trouble paying school fees over past 4 months	1.28 (0.22)	1.44 (0.30)†
Decline in health over past 4 months	1.07 (0.33)	1.75 (0.85)
Probabilistic estimate of being in school in 1 year	0.98 (0.02)	1.04 (0.04)
Employed	2.24 (1.19)	1.11 (0.76)
Observations (Respondents)	1663 (345)	1138 (225)

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001.

<sup>a</sup> Because the absence measure specifically refers to the week immediately preceding the survey interview, all independent variables were recorded during the same wave as the outcome (not lagged).

Finally, I test whether controlling for school absence mediates the association between relationship status and leaving school in the case-time-control models (Table 5). The first column of this table shows that when a lagged variable for school absence is added to the model, the odds ratio corresponding to relationship status is reduced only slightly, from 3.63 to 3.60. This negligible change, combined with the lack of a significant association between relationship status and absenteeism for female respondents in Tables 1 and 3, suggests that absence is *not* a major mechanism linking relationship status and leaving school. Rather than being a pathway through which relationships lead girls to leave school, absence from school appears to be a parallel process through which relationships alter educational experiences for *male* students, albeit with less severe consequences.



**Table 5: Exploring Whether Each Mechanism Mediates the Relationship Between Relationship Status and Leaving School for Female Respondents**

	Absence	School Performance [Trouble in School]	Female Non-Pregnant Subsample
<b>Case-Time Control Models<sup>a</sup> (Fixed-Effects for Nonrepeatable Events)</b>	OR/(se) (1)	OR/(se) (3)	OR/(se) (2)
Respondent was in a sexual relationship	3.60 (1.49)***	3.63 (1.16)***	2.21 (0.87)*
Observations (Respondents)	648 (127)	648 (127)	516 (98)
<b>Doubly-Robust Propensity Score Models<sup>b</sup></b>			
Predicted probability of leaving school if no respondents were in a relationship at wave 1			0.20
Predicted probability of leaving school if all respondents were in a relationship at wave 1			0.35
Difference in predicted probabilities (estimate of effect size of sexual relationship status on leaving school)			0.15 (0.07)*
<i>N</i>			339

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001.

<sup>a</sup> The case-time-control models include the following time-variant covariates (described in Appendix 1, Table A5): socio-economic status, current year in school, difficulty paying school fees, declining health, educational expectations, employment status, and dummy variables indicating survey wave. All independent variables are lagged by one survey wave.

<sup>b</sup> The doubly-robust models account for the following covariates (described in Appendix Table A5): age, socioeconomic status, current level of school, and attitudes and expectations related to education. These covariates were all used to estimate both the propensity scores and the outcome model, and were measured at wave one.

To examine whether changes in school performance help to explain the association between relationship status and leaving school for female students, I again start with bivariate analyses. In Table 1, there are no significant differences in end-of-year examination scores in Math and English between those who were in a sexual relationship and those who were not. The fifth row of Table 1 shows the proportion of person-waves in which a respondent reports having had trouble in school; again there are no significant differences by relationship status.

To ensure that other factors are not masking the effect of being in a relationship, I also conducted multivariate analyses for both measures of school performance (Appendix 1, Tables A4-A5). As might be expected from the null findings at the bivariate level, there are no significant associations

between relationship status and academic performance in any of these models. Finally, as I did with absenteeism above, to examine whether school performance mediates the association between relationship status and leaving school for female students, I added a lagged measure of having trouble in school to the case-time-control models (Table 5). Adding this variable has no effect on the size of the coefficient for relationship status: the odds ratio remains the same at 3.63. Together, these findings suggest that the association between relationship status and leaving school does not operate through academic performance, when measured using examination scores as well as subjective perceptions of having trouble in school.

To explore the extent to which pregnancies explain the association between relationship status and leaving school for female students, I first examine the reasons given for leaving school among those who did so between waves two and six (Table 6). Over one third of female respondents (34%) who reported leaving school attribute their departure to pregnancy, and an additional 8% cite marriage as their primary reason for leaving school. This table indicates that unlike absenteeism and lowered school performance, pregnancy does indeed appear to be a significant pathway through which relationships interrupt schooling trajectories for women of this age range.<sup>33</sup>

**Table 6: Reasons Given for Leaving School During Waves 2-6**

Reason for Leaving School	Analytic Sample (Left School in Waves 2-6)		Other TLT Respondents (Left School Before Wave 1)	
	Female	Male	Female	Male
Lack of interest in school	6%	9%	15%	12%
Financial constraints/ lack of supplies	43%	78%	49%	75%
Illness of Respondent/family member	3%	2%	6%	4%
Pregnancy	34%	0%	21%	0
Marriage	8%	2%	7%	1%
Other	6%	9%	2.5%	8%
Total	100%	100%	100%	100%
<b>N</b>	135	80	845	207

<sup>33</sup> To investigate whether this high proportion is due to the fact that respondents who are still in school at the start of the survey (and thus are in the analytic subsample used for this study) remain in school later into their adolescence, the third and fourth columns of this table present the reasons given for leaving school for respondents who left school prior to the start of the survey. While a considerably smaller percentage of these respondents attribute leaving school to pregnancy and marriage, these events together account for over a quarter of these earlier schooling exits, adding further evidence that pregnancy does indeed seem to derail school plans for a significant proportion of young women in Balaka.

But does school pregnancy fully explain the documented association between relationship status and leaving school for female students? To answer this question, I repeated the case-time-control and doubly robust models predicting school leaving, with the analytic sample restricted to female respondents who did *not* experience a pregnancy while enrolled in school. These results are presented in the third column of Table 5. In both the fixed effects and doubly robust models, sexual relationship status remains a significant predictor of leaving school for this “non-pregnant” subsample, though the magnitude of the effect is reduced. The results of the fixed-effects model tell us that respondents who are in a relationship face more than twice the odds of leaving school among this restricted subsample. The doubly-robust results show that female respondents who begin the survey in a relationship are 15% more likely to have left school two years later, among those who do not experience a pregnancy. The association between relationships and leaving school is only partially attenuated by removing pregnancy cases; women with sexual partners are still more likely to leave school even if they don’t get pregnant.

To summarize, the quantitative analyses show that female students do indeed face an elevated risk of leaving school if they have a sexual partner. However, this elevated risk does not appear to operate through increased absenteeism or lowered school performance, and pregnancies do not fully explain the observed pattern either. The results also provide evidence of gender dissimilarities in the associations between sexual relationships and educational outcomes: women (but not men) are more likely to leave school if they have a sexual partner, while men (but not women) are more likely to be temporarily absent.

## **The Cultural Context Revisited**

I now return to the qualitative evidence to make sense of these findings. I argue that rather than relationships detrimentally affecting students’ capacity to learn or attend school, the cultural antinomy between scholastic success and sexual behavior is itself a key element in the causal story linking these two domains in the lives of students. As with any quantitative data set, the TLT survey data show patterns produced by people behaving in reference to shared meanings and moral standards. The cultural schema linking sexual behavior with school leaving percolates through the decisions and actions of teachers, parents, students, and out-of-school youth. It shades their evaluation of the advantages and consequences of a course of action, and colors their judgments about other people. This section examines some of the ways that Malawian teachers, parents, and students attend to this cultural schema opposing sex and schooling. As I will show, these constellations of decisions and responses help to sustain this opposition in the lives of Malawian youth. It is against the backdrop of this highly salient cultural schema that students’ educational pathways unfold.

When describing the perils of student relationships, teachers often invoke the three mechanisms described above: absenteeism, poor academic performance, and pregnancy. But their school policies prohibit all “romantic pairings,” regardless of whether or not these outcomes are observed. Indeed, when asked what they would do if a high-performing student were caught having a relationship and her classroom behavior did not change, most teachers declared that they would still punish her. As Mr. Banda states:

**MF:** If a relationship is happening between two students, but it is not affecting their performance in class, is it a problem?

**Mr. Banda:** We have school rules and regulations that clearly state no relationships in school. So being a student, even if we can't say the relationship is actually affecting their performance, of course it is still against these rules and regulations.

Some teachers, like Mr. Mkandawire, a biology teacher at a large public school, were unable to fathom that a student could maintain a relationship and not have her performance affected, revealing the extent to which their judgments are colored by the sexual panic of schoolgirl relationships:

**MF:** Does it make a difference with this type of situation if a student is a very good student or if they are getting very good marks, and have good behavior, would you still punish them?

**Mr. Mkandawire:** But that doesn't happen. If a girl is in school and you find that she has involved herself in a romantic pairing, definitely her behavior starts to suffer. She will have her mind wandering towards this boy, and she will stop performing well.

This unwavering belief in the ill effects of relationships leads teachers to act swiftly in punishing students, often intervening before academic or behavioral changes are detected. Teachers described this type of preemptive punishment in all schools I visited. For example, Mr. Kumbuyo, a math teacher at a large government school, describes how teachers initiate the disciplinary procedure immediately upon seeing a student walking with a partner outside of class:

**Mr. Kumbuyo:** Sometimes we see that something is happening that is not academic. Like maybe outside of this school we can meet them, walking with their boyfriend or with their girlfriend... We tell them that tomorrow you come to the office. And we ask them to write what happened, and that teacher will be a witness. And if it is true that there was something between them, this is sufficient cause for suspension.

Teachers like Mr. Kumbuyo are acting in accordance with the pervasive belief that students cannot succeed in school if they are sexually active. Their punitive actions in turn reinforce this model by creating real obstacles for students' efforts to continue their education. A suspension often means a repeated year in school, as students are barred from taking compulsory exams or miss crucial lessons. Tazona, a 19-year old woman who left standard 8 one year ago, describes how such disciplinary actions resulted in her being held back:

**I:** What obstacles have you encountered at school as you were trying to continue?

**Tazona:** A boy proposed to me and the relationship became very famous, until even the teachers had heard about that story. They called me at the office... It was not agreed upon by me and that boy. I refused that, "I am being falsely accused. The boy proposed but I did not accept him." But they called upon the boy, and he accepted that, "She is really my girlfriend." So you can see there that his thoughts and mine differ there... And we both had to go home for a month, so that caused me to repeat the year.

While Tazona returned to school the following year, suspensions and other disciplinary actions that take students out of the classroom place additional hurdles on the long road that youth in

Malawi travel to complete their education. Though they are just one element in the cultural landscape linking sex and schooling, these preemptive punishments by teachers likely contribute to the pattern of girls leaving school after becoming involved in sexual relationships, even without detectable changes in their attendance or performance.

Parents also contribute to this pattern. Although the 1994 policy eliminated school fees at the primary level, sending adolescents to school still requires significant financial investments from parents, including secondary school fees, uniforms and supplies, and foregone wages. Parents are hesitant to make these investments if they don't believe their children will graduate, and recent research shows that these evaluations are influenced by whether they believe their children to be sexually active; "Rather than focusing on their potential inability to cover the costs of school expenses or the low likelihood that their children will find future employment, parents choose to focus on their daughters' sexual activity as endangering their schooling prospects" (Grant 2012:79). In my interviews, parents are described as being extremely concerned about the sexual comportment of their children (particularly their daughters), with their financial support contingent on their children's abstinence.

Most teachers I interviewed described parents as allies in regulating students' sexual behavior. For example, Mrs. Mwanza, the deputy headmistress at a girls' Catholic boarding school, describes her relationship with parents:

**Mrs. Mwanza:** In most cases you find that the parents are siding with you. Whatever you are trying to discourage in the students the parents are also strictly discouraging that.

**MF:** Have you ever spoken to a parent about this issue of sexual relationships and had the parent be ok with knowing that her daughter was in a relationship?

**Mrs. Mwanza:** no, they are so much against that, almost slapping the girl.

Teachers described this support from parents as vital to their efforts to corral students' sexuality. Indeed, in three separate cases, teachers mentioned parents coming to school to report evidence that a student was involved in a relationship.

Both teachers and students repeatedly mentioned the fact that parents may refuse to pay school fees if their children are sexually active. The threat of parental sanctions was described as giving students an incentive to avoid relationships; for example, Mrs. Lungu, a life-skills teacher at a small private school, reports that, "Girls, they are afraid of suspension because parents do not want to see them at home, they can stop paying the school fees. So they are more careful." Brother Chirwa, a headmaster at a co-educational Catholic school who took a more sympathetic view towards students, hesitates to involve parents in order to prevent students from losing financial support:

**Br. Chirwa:** First we call the girl and talk to her, only with the student. But sometimes a student will claim that I will not do this anymore, but you see it continuing. So then, you invite the parents.

**MF:** And how do the parents normally respond?

**Br. Chirwa:** Normally it is really a joint venture. Most of the parents, they say thanks for your concern. But in rare cases, some parents when you call them like that they say I will not give you

school fees anymore, because you are squandering my money. Or sometimes, they will say, you are no longer my child. So we avoid telling parents for that reason.

Parents pulling students out of school also came up in the adolescent interviews. Agness, a 17-year-old in her final year of primary school, describes how her cousin's parents stopped paying her fees due to rumors about her sexual behavior, which Agness insists were false:

**I:** What circumstances that lead a person to fail to achieve her educational goals?

**Agness:** People sometimes gossip, like they may go to your parents and say, "don't pay fees for that one she is just wasting your money." And sometimes they stop paying for you.

**I:** Does this really happen, just from gossip?

**Agness:** Yes, it happens, I'm telling you it happened to my cousin... Others were suspecting that she was having a sexual relationship. And they were saying don't pay for her. But she wasn't even having one.

**I:** Oh! Maybe she had it and you didn't know! [Both laugh]

**Agness:** Maybe but she is my cousin from my home village and I believe her.

**I:** So what happened to her?

**Agness:** She just left it, what can she do.

It is notable that Agness mentions gossip about relationships in response to a general question about the circumstances that can lead people to fail to achieve their goals. Indeed, sexual relationships were more frequently mentioned in this context than poverty, which reveals the scope of the moral panic around this issue in Balaka (Table 6).

Chisomo, a 19 year old who left school one year ago, describes how her brother responded when he feared that she was squandering his money for school fees by flirting with men:

**Chisomo:** [My brother] was insisting that I have done something while I haven't done that thing. That time I went to a friend's place to chat, a girl, so he liked following me, and when I was coming back from there I met a certain boy who greeted me...I stopped and greeted him then I went home and there wasn't anything else that happened. So reaching there in the evening it is when he was asking me that you stood with a boy at that place who is he to you so I said that there isn't anything. So while refusing he beat me with electricity's pipe. He was shouting that I was just trashing his money, and he kept on beating me.

Elsewhere in the interview, Chisomo stated that she had to leave school because the brother refused to continue paying her fees, due to his continued distrust in her sexual abstinence.

Because I interviewed teachers and young adults, the perspectives of parents are captured only through second-hand reports. Yet these glimpses consistently depict parents as highly attuned to the romantic leanings of their children, particularly their daughters. Because they see any sexual behavior as inevitably leading to school failure, their financial support hinges on faith in their children's abstinence. These responses from parents suggest another way that the deeply embedded *belief* in the antinomy between sex and schooling helps to *sustain* this antinomy in the lives of youth in Malawi.

In the adolescent interviews, two contrasting framings of sexual relationships emerged. Some,

facing insurmountable barriers on their way to graduation, deploy romantic relationships as a strategy to abandon their educational ambitions and pursue other avenues to adulthood. Others, holding tightly to their dreams of a better life through school but unwilling to forswear all romantic experiences, carefully construct relationships in opposition to this dominant cultural schema, partnerships they hope will help not hinder their scholastic pursuits. While encapsulating sharply contrasting motivations and behaviors, both patterns reflect youth working to create a respectable adult life in accordance with the cultural schema linking relationships and school failure.

Educational credentials in Malawi are fervently desired, not only because of their economic benefits but also their social correlates: they speak to a young person's honor and virtue (Johnson-Hanks 2006). Educational aspirations are also morality-laden, and students are expected to maintain optimism and dogged determination, even in trying circumstances (Frye 2012). Yet continued investment in school is costly, both financially and in terms of the consequences of staying in school for women's marriage prospects, particularly as they advance in age (Lloyd and Mensch 1999; Quisumbing and Hallman 2005). When it becomes clear that graduation will remain an elusive dream, young people must move on and pursue other avenues to a secure adulthood. Because of the taken-for-granted antinomy between sex and schooling, interview respondents describe starting a relationship as a socially-codified means to abandon the quest for a diploma. While students who engage in sexual relationships are temporarily shamed by teachers, parents, and peers, after they have left school and the dust has settled, such sanctions typically fade. Having married and started families, these women have transitioned to an alternative life path, one that is socially acceptable and also offers a chance of financial security, if they manage to find a good husband.

Respondents who reported pursuing relationships as a way to leave school described prolonged struggles to stay in the classroom. For example, Jennipher describes:

**Jennipher:** I was going to my school without eating...coming from there finding out that there is no flour... It was affecting so much because I wasn't listening in class because I was hungry and also sometimes the teachers would send me out of the class because my clothes were dirty or no fees, so I stayed at home and missed school. This happened so many times.

Jennifer's struggles are typical in this context; students often come to school hungry, lacking uniforms or supplies, and with no money to pay mandatory school-related expenses. Adolescent respondents often describe enduring these hardships for several years, coming to class when they can manage and missing long periods of instruction when money is scarce. This pattern is sustainable in the short term, as students are permitted to return to school. But in the long run, this staccato tempo does not bode well for progressing through secondary school. Frustrations often emerge around the three national-level examinations that are required to graduate from primary school, advance to senior secondary school, and complete secondary school. Lacking money for preparatory materials and having attended school sporadically, financially strapped students often fail. At these moments, students like Jennipher begin to waver in their commitment to staying in school, facing the prospect of repeating the same level. In these periods of frustration and reevaluation, relationships are often viewed as a way

out:

**Jennifer:** I was feeling like there wasn't anything good that would come of school, I was lacking so many things and when it came time for examinations I did not have money. And I was in standard 8, next would be [secondary school] fees, and there was no money for that. So I thought, let me just find a man. I wasn't feeling hope about school, that is why I saw that I should better be having relationships.

In describing leaving school, women like Jennifer reference the cultural schema opposing relationships and education. Because the narrative logic underlying this schema implies that one cannot stay focused on school after entering a sexual relationship, pursuing a partner is akin to stepping away from education and towards more realistic visions of the future. Yet these women do not appear as weak and unable to control their desires; rather they describe themselves strategically deploying this cultural schema in order to embark on an alternative pathway to adulthood. No longer hopeful of becoming career women, these women work to become respected wives and mothers.

While they are subject to scolding and gossip in the short term, after they have dropped out and gotten married, they describe people generally accepting their new roles. Ruth describes meeting her teachers a few months after dropping out: "The other day I met my former teachers on the road, when going to town. They asked me why I am not coming to school, so I said that I have gotten married now... They accepted and they wished me all the best. Then they left and continued going where they were going." Chimwemwe describes a similar acquiescence from her parents when they discovered she had started a sexual relationship while in school:

**I:** Ok what about your relatives, what did they do when they heard that you had a boyfriend?

**Chimwemwe:** they just came and said ok now you have started a relationship, you can't be just staying it is better that you should get married. At first, they were disappointed... But then they just said all right, so you are with this man, you should get married, better to quit school now and go with him. Soon we will eat chicken [reference to traditional wedding].

Because they view all relationships as necessarily leading to school failure, Chimwemwe's parents quickly move on from expressing disappointment to ensuring that she marry her partner, so that she is not left "just staying" — no longer in school but not married either. Indeed, as Tawonga describes, "just staying" is a fate worse than marriage, lacking both the hopeful luster of studenthood and the familiar respectability of marriage:

**I:** Ok, so what do you think being married will mean in your life?

**Tawonga:** Being married will help me because when a person is married you are honored rather than that you should not be married but you should have a child or just be staying at home not schooling, it is shameful.

The adolescent interviews also revealed a counter-narrative, voiced by a minority of high-achieving female students, of relationships built around encouraging and helping each other with schoolwork. These relationships were explicitly contrasted with the dominant model of



student relationships, and the women described communicating their unique expectations to their partners. For example, when explaining how her relationship started, Caroline, a 19 year old in Form 2, states:

**Caroline:** He started proposing to me that, 'I need you, I love you.' [Both laugh] So at first I refused so many times, it really took a number of days before I accepted him.

**I:** Why were you refusing him?

**Caroline:** At first I thought that he just wanted an ordinary affair, so I was telling him that I do not want an ordinary affair, I want a man who will wait for me to finish school and be discussing ideas and helping me. So he said that, 'so what is this, I thought I am proposing this to you. I am in form 4 and you can see that we will be helping each other and giving encouragement.' So I saw that he is serious and I accepted.

Once she confirmed that this man was also not looking for “an ordinary affair” and would put his studies first, she was willing to date him.<sup>34</sup>

A key characteristic of this “school positive” counter-narrative is that when asked how they spend time together, these women emphasize helping each other with school and “encouraging” each other. Mary, a 21-year-old who was awaiting the results of her secondary school completion exams at the time of her interview, describes seeing her partner “only at school, or maybe when we were on break.” When asked what they did together, Mary replies:

**Mary:** We discussed about the future, and sometimes we were telling each other, “They were teaching us this and I did not understand.” Like geography was difficult for me, he was able to help me, and what he didn't know he could tell me, “You should ask another person.”

This does not mean that they are completely abstinent; indeed all women who expressed this alternative model reported having sex with their partners. But their physical intimacy is tightly controlled, and these women are vigilant towards any sign that the relationship might occupy too much time or attention. They describe their partners as willing to fulfill this alternative role, but floundering in their execution, becoming more demanding over time. At the first indication of such weakness, these women tend to end the partnership. For example, Chikondi describes how her partner's increasing demands caused her to break up with him:

**Chikondi:** We stayed a while together, but the other month he started saying, “I cannot have a relationship and just stay without having sex more often” Then I said that “Ah! I cannot manage so if it is like that, you can go and search for another person, because we agreed that school should come first.”

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<sup>34</sup> Similarly, Chikondi, who is 17 and in Form 3, describes how she communicated her expectations at the start of her relationship: “I told him that there are different types of relationships, the relationship I can manage is of sharing ideas, but I cannot manage the other relationship, the one like marriage, that will confuse me.” In Kisumu, Kenya, students make a similar distinction between “relationships for school” and “relationships for love” (Mojola 2008).

Indeed, out of five cases where women described this alternative model, only one [Caroline's] was still ongoing. All others had ended things when their partners failed to meet their high expectations.

These women are a small minority; this alternative model was described by only 5 of 32 female interview respondents. Yet this handful of women were articulate in their depictions and consistent in what they described, and their accounts shed new light on the statistical results described above. Specifically, this counter-narrative helps to explain two findings. First, it offers a theory for why women who have sexual partners and who remain in school are not more likely to report negative educational outcomes such as absenteeism, lower test scores, or trouble in school. Counter to the pervasive expectation that any sexual encounter will derail women's educational trajectories, these women are able to maintain their success in school while having a relationship. And second, they help to explain why the status of "in school and in a relationship" is so unstable (Table 2). This counter-narrative is brittle; the women describe carefully monitoring their partners for weaknesses that might threaten their educational ambitions, and at the first sign that their partner wants more of an "ordinary affair," the relationship is terminated.

## The Gendered Nature of the Cultural Schema

A closer look at how individuals attend to the shared cultural narratives about sex and schooling can also help us to understand why the effects of relationships on educational outcomes are so gendered, with boys more likely to be absent while girls face a heightened risk of dropping out. While sexual relationships are thought to be damaging for all students, girls are believed to be much more vulnerable to the temptations of sexual relationships at this age. Adolescent women are portrayed as craving attention and positive affirmation, greedy for money to spend on clothes and beauty products, and consumed with dreams of getting married and having babies. As such, female students are subject to considerably more scrutiny from parents and teachers than are boys. Almost all of the examples that teachers gave of students disciplined for being caught in a relationship concerned female students. This passage from my interview with Mrs. Mwanza illustrates this emphasis on girls' vulnerability:

**Mrs. Mwanza:** Sometimes girls they can be a bit naïve. They can be told something, then they just follow what the friend is doing which is not good... Now, this girl, if she is not helped, when she grows at this age, there is a tendency to seek that love that she needs... So now, where does she get it? She can get it either from the friends, or sometimes now these days she can get it from the boy... In that case you find that a girl is weak in studies.

Teachers' attempts to regulate the behavior of girls are often expressed as efforts to empower girls and free them from "cultural factors." Mrs. Ngosa, headmistress of a girls' Catholic school, states:

**Mrs. Ngosa:** Most of the young people when they enter into a relationship they run to sex. So this is how it becomes more dangerous. I can say many of the young girls fall into this because they have no skills. Their culture tells them you are a weaker sex so the boy has power over you.

So you will find that to give in to sex, sometimes they will believe that this culture is stronger than me. No ability, no courage to say no.

Although they often invoke language of gender empowerment, the actions of teachers as they attend to this perceived weakness fall far afield from what Western observers would consider empowering: they strictly monitor girls' behavior for signs of sexual desire and then punish them harshly. Watkins and Swidler (2013:205) describe similar behavior among staff in local AIDS organizations: "Despite the rhetoric of women's vulnerability, NGO brokers seek to restore moral order by suppressing vice, reducing temptation, and—especially—restraining women's behavior."

Parents also seem to be particularly concerned with the sexual purity of female students. All descriptions of parents punishing students involved female students. In the following passage, Brother Chirwa alludes to parents' heightened concern over their daughters' sexuality:

**MF:** So you invite the parents of the boy and the girl together?

**Brother Chirwa:** Usually it is just the girl, the girls they have more of these relationships than boy students do. And their parents become very serious in these cases, because they think the girl will just get pregnant.

Brother Chirwa's depiction is consistent with recent evidence from interviews with parents, who "express a highly gendered perception of girls—but not boys— as unable to balance both a romantic interest and a focus on school" (Grant 2012:76).

This gendered cultural schema may enable male students to more successfully juggle school and relationships, thus helping to explain the gender differences in the statistical findings. Boys are not as carefully watched, thus they can more likely miss school temporarily without incurring harsh punishments. Girls are assumed to be at a heightened risk of falling prey to sexual temptations, thus their behavior is closely monitored and any indication of sexual activity triggers a punitive chain reaction that can result in their being preemptively removed from school.

Differences in partner characteristics may also explain these gender discrepant findings. According to the survey data, female students more often date men who are currently out of school (37% of those with partners versus 12% for male students). About one in five sexual partners of female students are formally employed, compared with only about one percent of the partners of male students. Female in-school respondents also more frequently report having partners who live outside of Balaka district than do their male peers (24% versus 13% for men). Together, these statistics indicate that male students more frequently date women who are available during school hours, while female students tend to date men who are working or live far away, making daytime visits more difficult. As such, men may not only face a lower hazard of punishment for skipping school; they may also have more incentives to do so.

## DISCUSSION AND CONCLUSION

Relationships do indeed disrupt schooling trajectories for women, but not because they negatively affect behavior or academic performance. Instead, partnerships lead to school leaving because they are dissonant with a deeply salient cultural schema about what it means to be a student, particularly for girls. Sexual relationships threaten the moral boundary between in-school and out-of-school youth. Teachers, parents, and students police and protect this boundary in various ways, and it is these actions that sustain its relevance for youth in Balaka.

This article provides insight into the mechanisms through which culture influences individual life-course trajectories, and suggests that attention to cultural meanings can lead to a deeper understanding of aggregate-level demographic phenomena. Advances from cognitive sociology tell us that shared cognitive schemas are instrumental in shaping our behavior (Cerulo 2002; DiMaggio 1997; Vaisey and Lizardo 2009). Indeed, the present study demonstrates that the cultural schema opposing sex and schooling is part of the causal structure linking relationship status with school leaving for female respondents. This is likely to be true for other aggregate-level phenomena as well. For example, among middle-class young adults in the United States, many couples cohabit for extended periods of time, share bank accounts, plan families, and make career choices together without getting married (Kefalas et al. 2011). Becoming engaged may produce little change in how these couples interact or their commitment towards each other. Yet because of the enduring symbolic significance of marriage, after becoming engaged they are likely to be treated differently by family and friends (Cherlin 2010). In other words, the cultural meaning surrounding marriage, and the actions of people attending to these meanings, transforms these relationships. As Swidler (2001:106) writes, “Rituals and traditions convey meanings... the ritual system [of becoming engaged] does have independent influence on action (aside from its influence on buying rings).” To provide another example, the proportion of Americans reporting no religious preference doubled in the 1990s, driven not by changes in religious belief or practices but instead by the shifting cultural meaning of organized religion, which became increasingly tied to the Religious Right (Hout and Fischer 2002).

Survey data represent assemblages of actions and decisions carried out in relation to cultural schemas, but these shared schemas are concealed in most statistical analyses, which assume independence between explanatory variables and fail to account for relationships between actors. Linked qualitative and quantitative data provide opportunities to examine the cultural meaning systems that undergird statistical patterns, and these data are increasingly available (Schatz 2012). But the goal of understanding how shared schemas shape demographic trends points to some unique methodological concerns. Mixed-methods researchers often privilege “nesting” interview respondents within quantitative surveys in order to more deeply examine the motivations underlying observed behaviors (Small 2011:69; see also Bennett et al. 2009; England and Edin 2009; Vaisey 2009). However, the present study shows the advantages of interviewing people outside of the survey sample, particularly authority figures or others most likely to enable or constrain the actions of survey respondents. This article also shows that qualitative data can reveal not only how people interpret their circumstances and experiences using cultural schemas, but also the various ways that individuals perpetuate shared meanings through their actions, either by shaping their

own life trajectories to conform to these models or by intervening in the lives of others to enforce them.

I have focused on the ways that *individuals* behave in accordance with the cultural schema opposing sex and schooling. But institutions also play a role in sustaining shared schemas, and may do so for different reasons than the individuals who populate them. For example, for schools in Malawi, this model may provide a *moral* explanation of why so many students fail to achieve their goals—they are not able to resist the temptations of sex—which may be more palatable than the *structural* reason—there simply aren't enough resources to educate all capable children who begin school in Malawi (Kadzamira and Rose 2003). Such a moralization of educational failure has been documented for poor youth in the United States (MacLeod 2009; Young 2004). HIV/AIDS organizations may be motivated to perpetuate this schema because it neatly echoes their fundamental dictum: wait to have sex until you are older and married, or you will face severe consequences (Watkins and Swidler 2013).

These findings have important implications for those seeking to improve educational retention in Malawi. Policies aimed at reducing the extent to which sexual activity stalls educational trajectories have typically pursued strategies of prevention (i.e., educating youth about the risks and consequences of sex) or mitigation (i.e., allowing students to return to school after having given birth). Yet this study suggests that educational outcomes might be improved through policies geared towards reducing the stigma associated with being sexually active while in school. Adolescents in Malawi face myriad risks and pitfalls as they have sex and fall in love, but relationships are also an important developmental milestone, particularly in a context of early and nearly universal marriage. As more youth remain in school through early adulthood, abstaining until graduation becomes less feasible. If students were encouraged by adults to pursue healthy and mutually affirming relationships, rather than preemptively punished for any sign of romantic or sexual activity, this might help reduce the friction between having sex and staying in school.

Finally, this article helps elucidate why sexual relationships are associated with leaving school specifically for girls in the sub-Saharan African context (Biddlecom et al. 2008; Clark and Mathur 2012). Scholars have posited that pregnancy may be driving this gender discrepancy (Eloundou-Enyegue 2004; Meekers and Ahmed 1999), but evidence has been mixed regarding the role that pregnancies actually play in this process (Lloyd and Mensch 2008; Mensch et al. 2001). I find that even when pregnancy cases are removed, girls face a significantly higher likelihood of dropping out if they are in a relationship. I argue that the cultural schema opposing sex and schooling overlaps with schemas of gender and sexuality, making the boundary between sex and school more salient for female students and potentially exacerbating gendered inequalities in school attainment.

## 4: SEX IN SEQUENCE: EDUCATION AND THE ORDERS OF INTIMACY

Over the past two decades, school enrollment has expanded across sub-Saharan Africa at an unprecedented rate, as the international development community has coalesced around “Education for All” as a key programmatic priority (Kendall 2007; UNESCO 1990, 2012; Vavrus 2003). Though not accompanied by a corresponding increase in employment opportunities (Jansen 2005; Mundy 2007), this increase in attendance has fundamentally transformed the period of adolescence (Caldwell et al. 1998; Lloyd 2005). Students are encouraged to shape their self-identities around ambitious career aspirations, and often bear crushing disappointment when forced to drop out, their aspirations unrealized (Frye 2012; Meinert 2009). Youth are exposed to Western culture through internationally funded school curricula, and learn to use technologies that bring them in virtual dialogue with people in far-off places (Baker and LeTendre 2005; Fair et al. 2009). Boundaries between friendship networks are forged around which schools individuals attend and how far they go (Masemann 1974; Poulin 2007b). And axes of inequality have shifted from who can attend school at all to who can pay private tutors or enroll in elite schools, what kinds of familial responsibilities students bear outside of class, and how quickly they must drop out (Kendall 2004; Stambach 2000).

One dimension of adolescence that seems to be particularly influenced by educational experiences is sexual behavior and union formation. Researchers have consistently documented that more educated young people tend to have sex and get married at older ages, and to engage in less risky sexual behavior (e.g.: Agha et al. 2006; Blanc and Way 1998; Glynn et al. 2004; Zuilkowski and Jukes 2012). These insights reflect the state of knowledge about sexual experiences in sub-Saharan Africa: our understandings are largely filtered through a few “landmark” events, namely first sex, marriage, and childbirth. Like stars in a constellation, these landmark events offer only vague outlines of how sexual relationships progress. We know that these “big” demographic indicators are surrounded by numerous other relationship milestones, such as going out on dates, introducing each other to important people, and kissing or otherwise initiating physical intimacy (see Hunter 2010 for a similar perspective).

Variation in these other steps is a crucial component of the subjective experience of sexual relationships, and given schools and teachers’ efforts to promote specific models of sexuality and relationships among students, it seems likely that relationships vary along educational lines in terms of these other events as well. However, this dimension is almost completely ignored in our scholarship. In this chapter, I seek to fill some of the gaps in our knowledge about relationship experiences, using uniquely detailed data on sexual experiences in Malawi that allows me to examine relationships as sequences of interdependent events. This approach

allows me to examine the extent to which educational attainment is associated with differences in how romantic relationships are experienced by young adults in Malawi.

The literature centers around three mechanisms through which schools might structure relationships in this context, which I examine in the second half of this chapter. First, education is said to nurture the development of cognitive skills, improving students' ability to critically evaluate the risks surrounding sexual activity and to choose their partners wisely. Individuals with higher levels of education are found to be better able to digest messages about HIV risks, and literacy and school performance seem to explain some of the differences in sexual experiences by educational status (Grant and Hallman 2008; Marteleto et al. 2008; Smith, Salinas, and Baker 2012).

Second, schools are believed to encourage students to pursue different sets of ideals regarding relationships and sexuality. Reflecting a conservative school culture dating back to the missionary roots of schooling in the region, relationships are strictly forbidden; students are repeatedly instructed to maintain abstinence and punished when they don't (Grant 2012; Wight et al. 2006). At the same time, through generously funded school-based sexual education programs, teachers spend considerable classroom time encouraging students, when the time comes, to pursue "modern" relationships, characterized by egalitarian gender relations, open discussions of sex, and careful planning around childbearing (Herman et al. 2011; Mantell et al. 2006).

And third, schools are theorized to position women differently in the sexual social field (Green 2008; Martin and George 2006). Students in Malawi are expected to engage in practices of disciplined comportment and symbolic self-fashioning—they wear uniforms, keep their hair short, speak of "self-esteem" and "avoiding peer pressure," and maintain strict regimens of study (Coe 2005; Frye 2012; Johnson-Hanks 2006; Masemann 1974). Through these practices, this theory posits, students are perceived as more attractive and commanding greater respect from men, giving them access to more desirable partners and increasing their agency within their relationships.

This chapter is organized as follows. First, I outline recent changes in educational opportunities and relationship activity in sub-Saharan Africa, and review the literature connecting these two types of social change. Next, I describe the survey data used in this study, the relationship sequence method, and the analytic strategy. Turning to the results, I describe the most salient dimensions of contrast in young adult relationships in sub-Saharan Africa, show evidence that educational attainment strongly predicts variation in relationship sequences, and conduct formal mediation tests of the three mechanisms described above. I conclude with a discussion of the findings.

## **EDUCATION AND SEXUAL RELATIONSHIPS IN SUB-SAHARAN AFRICA**

### **Emerging Opportunities in the Education for All Era**

Over the past 25 years, expanding access to education has remained a top priority in the international development community. In 1990 at the World Conference on Education for All in Jomtien, Thailand, 155 countries pledged to "universalize primary education and massively

reduce illiteracy by the end of the decade” (UNESCO 1990). At the 2000 World Education Forum In Dakar, Senegal, 164 participating countries reaffirmed their commitment to increasing access to education, and identified six measurable goals to be achieved by 2015. Education also features prominently in the Millennium Development Goals; universal primary education is the second of the eight goals. Each of these global commitments resulted in a flood of money and programs aimed at expanding enrollment in education in developing countries. And with a high proportion of low-enrollment countries located in sub-Saharan Africa, much of these resources were dedicated to building schools and strengthening educational infrastructure in this region (Mundy 2007).

National governments have also invested considerable resources in expanding access to education. Across sub-Saharan Africa, total government spending on education increased by five percent per year since 1999 (UNESCO 2012). And beginning in Malawi in 1994, a number of sub-Saharan African countries eliminated primary school fees, including Ethiopia, Kenya, Tanzania, Swaziland, Lesotho, Zambia, Uganda, Democratic Republic of Congo, Burundi, Ghana, and Mozambique. While these policies have been criticized for increasing quantity of students at the expense of quality of education (Chimombo 2005; Jansen 2005; Mundy 2002), each country that implemented Free Primary Education experienced a rapid and dramatic increase in enrollment during the years following the policy change (Oketch and Rolleston 2007; Tafirenyika 2010; UNICEF 2009).

These international and national-level efforts have been credited with measurable gains in school enrollment. Between 1999 and 2010, total primary enrollment increased by 62 percent across sub-Saharan Africa, the highest rate of increase for any world region (UNESCO 2012). (UNESCO 2012) During the same period, the percent of primary-aged children who were out of school in sub-Saharan Africa decreased from 42 percent to under 25 percent. While gains have been smaller, secondary school enrollment has increased across the region as well, with the secondary gross enrollment ratio increasing from 25% in 1999 to 40% in 2010, again the most rapid growth rate in the world (UNESCO 2012). While the region is unlikely to meet the MDG or EFA school enrollment targets by 2015, still a substantially larger proportion of eligible students across sub-Saharan Africa attend school today compared with at the turn of the millennium.

## **Changing Sexual Experiences**

The timing and context of first sexual experiences across sub-Saharan Africa has also changed over the past two decades, though considerable variation exists across countries. Age at first sex has generally increased over time. Data from the 22 African countries with multiple Demographic and Health Surveys available between 1985 and 2010 shows that the median age at first sex among women aged 25-29 has increased in all but one of these countries, at an average rate of half a year per decade (Author’s Calculations, NSO-Macro 2011). Zaba et al. (2004) also find evidence of a secular rise in age at first sex across six sub-Saharan African countries.

Age at first marriage has increased as well, and sexual debut occurs more frequently outside of



marriage (Wellings et al. 2006). DHS data from across the region reveal that the prevalence of premarital sex among women increased significantly in 19 out of 27 countries analyzed and marriage is the most common context of sexual initiation in a decreasing proportion of countries, compared to 20 years earlier (Mensch et al. 2006). And a recent analysis of trends in age at first sex and marriage in East and Southern Africa finds that the interval between first sex and first marriage increased in four out of five countries analyzed (Marston et al. 2009; see also Blanc and Way 1998).

## **Connecting Educational Opportunities and Sexual Experiences**

These two types of social change are interconnected. Throughout sub-Saharan Africa, as well as in more developed contexts, extensive evidence tells us that women who go further in school have distinct sexual experiences when compared with their less-educated peers. More educated women have sex at older ages (e.g.: Agha et al. 2006; Clark and Mathur 2012; Cooper et al. 2007; Duflo et al. 2006; Erulkar and Ferde 2009; Hallett et al. 2007)<sup>35</sup> and are also more likely to delay marriage (Blanc and Way 1998; Lloyd 2005).

Educational attainment and school enrollment are also associated with less risky sexual behavior, including higher levels of condom use (Agha et al. 2006; Boulle et al. 2008; Clark, Poulin, and Kohler 2009; Lagarde et al. 2001) and smaller age differences between partners (Gregson, Waddell, and Chandiwana 2001; Hargreaves et al. 2008). Women who have gone further in school are also less likely to exchange money for sex or to have sex on the first day of meeting (Glynn et al. 2004). The link between educational attainment and number of sexual partners is less clear, with some studies reporting a protective effect of education (Magnani et al. 2002; Mmbaga et al. 2007; Mnyika et al. 1997) and others finding that women with more education have more partners, on average (Dinkelman, Lam, and Leibbrandt 2007; Maria 2007). Zuilkowski and Jukes (2012) argue that educational attainment shifts from a risk factor to a protective factor over the course of local AIDS epidemics, as more information becomes available about the risks associated with multiple partnerships (see also Glynn et al. 2004; Sandøy et al. 2007).

While most studies examining the associations between sex and schooling are observational in nature, three recent studies apply a random experiment to elucidate the causal mechanisms at play in this association. Baird et al (2010) find those who were selected to receive a cash transfer, conditional on satisfactory school attendance, were significantly less likely to report early marriage, teenage pregnancy, and sexual activity one year later than were those who were selected into the control group. While it is difficult to disentangle the effects of school attainment from those of the financial transfers, this study provides suggestive evidence that staying in school may have a causal effect on sexual behavior. Duflo et al (2006) evaluated the impact of reducing the cost of education by providing uniforms free of cost, and found that girls

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<sup>35</sup> There is some evidence that the relationship may work in the opposite direction in urban South Africa (Dinkelman, Lam, and Leibbrandt 2007; Marteleto, Lam, and Ranchhod 2008).

attending schools assigned to this intervention were 13% less likely to report having sex and 10% less likely to become pregnant than were students in schools not selected for the treatment. And Hallfors et al. (2011) find that students attending schools that received an intervention including payment of school fees and provision of uniforms were one third as likely to be married after two years, and were also significantly more likely to endorse gender equity and to say they were abstaining from sex because of the negative consequences.

For the most part, studies examining differences in sexual behavior between more and less educated youth in sub-Saharan Africa use crude measures such as age at marriage, age at first sex, or whether a condom was used during last intercourse. While we know quite a lot about the various risk factors predicting the onset of sexual intercourse among African youth, we know relatively little about the relationships themselves, and the processes of courtship and progressions of intimacy that define them. The evidence that we do have typically comes from qualitative studies that are narrower in scope and generalizability, often focusing on specific sub-groups with limited variation in educational attainment. Taken as a whole, this work suggests that relationships indeed unfold differently for more and less educated youth in sub-Saharan Africa.

Educational experiences stratify sexual networks, with more educated women seeking men who are secondary school graduates and who are employed in town (Poulin 2007b). Educated men and women are more likely to choose their own partners and to privilege modern ideals of romantic love and emotional intimacy when selecting a potential spouse, while less educated women often marry partners chosen through negotiations by parents and broader kinship networks, selected based on broader familial alliances (Smith 2001). In addition to choosing different kinds of partners, more and less educated women have also been found to engage in different courtship practices within relationships. Couples with more education between them more frequently spend time with each other in public, either in social groups of mixed genders or alone on dates, changing traditional norms of sex-segregated socialization (Spronk 2009). Because women who have gone farther in school more often hide their relationships from their parents and relatives, they less frequently bring men home or spend time with them near their parents (Grant 2012; Harrison 2008). Highly educated youth are more likely to have mobile phones and maintain online profiles and email accounts, enabling them to keep in touch with their partners through text messages, Facebook posts, or phone calls when not physically in the same place (Fair et al. 2009; Hunter 2010; Johnson-Hanks 2007).

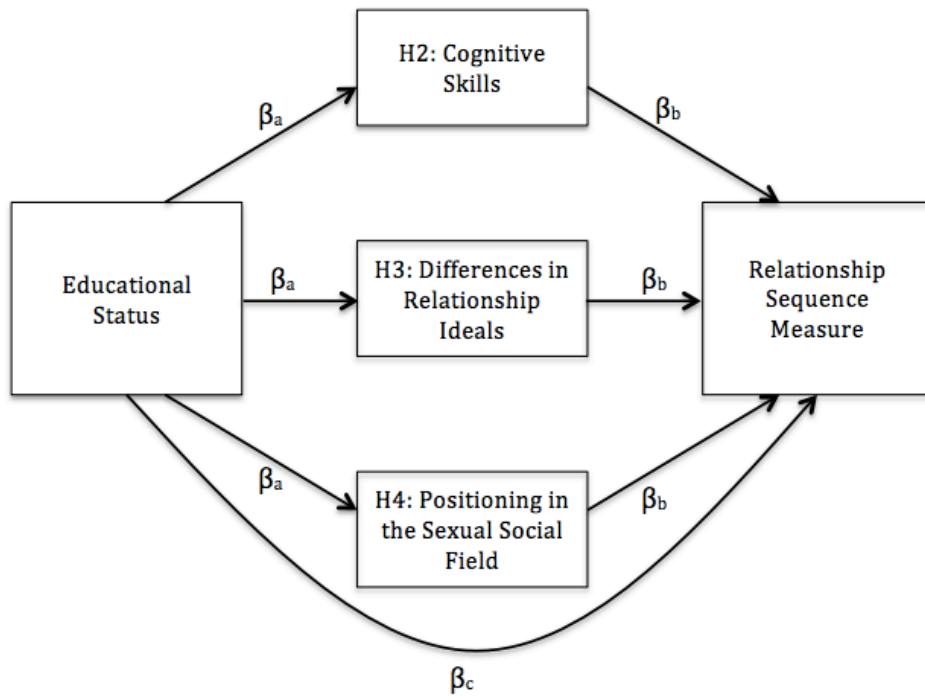
Drawing on this body of evidence, my analysis centers on the patterning of relationship events by educational status in Malawi. I seek to retain the aggregate-level insights gleaned from quantitative analyses as well as the more nuanced conception of relationships found in more in-depth approaches, which consider relationships not as riskscape for sex but instead as socially mediated series of happenings through which couples form complex bundles of affinities, vulnerabilities, and dependencies. The consistency with which researches find correlations between educational attainment and sexual experiences across contexts and methodological approaches leads to my first hypothesis:

*H1: Educational attainment will be one of the most significant predictors of variation in the sequences of events in sexual relationships among youth in Malawi.*

## MECHANISMS LINKING SCHOOLING AND RELATIONSHIP PATTERNS

The second half of my paper will adjudicate between three competing theories, each associated with specific causal mechanisms through which scholars suggest that formal schooling might structure women’s sexual experiences in Malawi: (1) facilitating the development of critical thinking and cognitive abilities through exercises and formal instruction, leading to different patterns of decision-making regarding sex (2) exposing women to different cultural schemas and moral standards about sex and romance through sexual education programs and punitive school cultures regarding sexuality, leading educated youth pursue unique sets of relationship ideals (3) positioning people differently in the sexual social field through practices emphasizing self-discipline and messages cultivating self-efficacy, leading educated women to have access to more desirable partners and to have greater power within their relationships. These proposed pathways are illustrated in Figure 1. I will discuss each theory in turn.

**Figure 1: Three Mediation Pathways**



### Cognitive Skills and Critical Decision-making

The cognitive skills hypothesis posits that schooling shapes sex outcomes by endowing women with greater capacity for critical thinking and decision-making. This perspective rests on the belief that education “teaches one to think” and exerts measurable changes in cognition (Peters et al. 2010:1). These cognitive skills in turn lead to improved abilities to make decisions in other

life domains (Baker, Salinas, and Eslinger 2012; Nisbett 2010). Scores on literacy and numeracy tests are often used as proxies for the cognitive skills developed through access to formal schooling. Literacy is significantly associated with virtually all neuropsychological tests of cognitive ability (see Ardila et al. 2010 for a review), with particularly strong effects on working memory, phonological processing, and mental organization and attention (Castro-Caldas et al. 1998; Kosmidis, Zafiri, and Politimou 2011). While the effects of literacy on cognitive ability can be hard to separate from other benefits of formal schooling, a prospective study of illiterate adults found that cognitive test scores improved as they learned to read independently (Ardila, Ostrosky-Solis, and Uriel-Mendoza 2000). Regarding numeracy, neuroimaging shows that numerical exercises activate other regions of the brain and may enhance other cognitive abilities (Eslinger et al. 2009). Numeracy has also been shown to be associated with spatial representation and working memory (Geary 1994; Mix, Levine, and Huttenlocher 2001).

According to this perspective, educational attainment represents an accumulation of knowledge, critical thinking, and cognitive skills that contributes to more healthful patterns of decision-making. Indeed, numeracy and literacy have been found to be associated with various health behaviors, including taking preventive measures against chronic diseases, efficient use of health services, and adherence to treatment protocols (Cavanaugh et al. 2008; Howard, Gazmararian, and Parker 2005; Lipkus and Peters 2009; Reyna et al. 2009). Numeracy and literacy scores have also been linked to health outcomes, including body mass index, self-reported health, diabetes, and heart failure (DeWalt et al. 2004; Huizinga et al. 2008; Marcus 2006; Reyna et al. 2009; Wolf and Gazmararian 2005).

In the present case, the cognitive skills and critical decision-making hypothesis predicts that these cognitive abilities will lead respondents to make more informed and beneficial choices about relationships and romantic encounters (Smith et al. 2012). Mounting evidence from sub-Saharan Africa suggests that the cognitive aspects of education are critical in shaping patterns of sexual behavior. Marteleto et al. (2008) found that male and female students in urban South Africa who performed well on a literacy and numeracy exam administered in 2002 were significantly less likely than those who performed more poorly to become sexually active by 2005. Grant and Hallman (2008), also using data from South Africa, found that adolescents who had entered school late were at significantly greater risk of becoming pregnant while enrolled in school than were those who started at the conventional age. This study further finds that grade repetition, which the authors consider an indicator of poor school performance, was positively and significantly associated with the risk of becoming pregnant (Grant and Hallman 2008).

Much of the research examining the mediating effect of cognitive skills focuses on behavioral responses to HIV. A recent study analyzing data from 9 African countries shows that “education-enhanced cognition means that individuals with higher levels of education are better able to digest messages about health, and that this effect mediates the association between educational attainment and condom use (Baker et al. 2010). Similarly, researchers in Ghana administered tests measuring decision-making abilities, working memory, and numeracy, and found that once these cognitive skills were controlled for, educational

attainment was no longer significantly associated with knowledge about HIV or risk-reducing behaviors, including using condoms, talking about HIV to one's partner, and getting tested (Peters et al. 2010). There is some evidence that the role played by cognitive skills in mediating the relationship between educational attainment and HIV risk-reducing behavior patterns has increased over time. Baker, Collins, and Leon (2008) show that the shift from education being a risk factor for HIV/AIDS to a preventative factor is correlated with the increasing availability of accurate information about the disease. They theorize that as people began to better understand how the disease spreads, "with accurate information, the central cognitive effects of schooling on reasoning skills become operative and override non-cognitive social effects," i.e., higher social status leading to greater access to sexual partners (Baker et al. 2008:469; see also Smith et al. 2012).

The evidence that cognitive skills are improved through exposure to formal schooling and that these skills mediate the association between educational attainment and sexual behavior leads to my second hypothesis:

*H2: If cognitive skills and critical decision-making is a mechanism through which educational attainment is correlated with differences in relationship experiences, then literacy and numeracy scores will mediate the statistical association between educational attainment and relationship sequence patterns.*

## **Differences in Relationship Ideals**

In their recent review, Zuilkowski and Jukes (2012:562) discuss the impact of education on patterns of sexual behavior in sub-Saharan Africa in terms of two "proximal determinants of behavior:" a person's *intention* to engage in a particular pattern of behavior and her *capacity to act* on her intentions. The second hypothesized mechanism focuses on the former, on differences in relationship ideals themselves rather than on people's varying ability to carry achieve them. In both industrialized and developing contexts, researchers have documented that young adult aspirations, perceptions, and decisions about romantic relationships are conditioned by shared cultural models, which vary by social class (Cole 2010; Edin and Kefalas 2011; Hamilton and Armstrong 2009; Hunter 2010), religious affiliations (Agadjanian and Menjivar 2008; Regnerus 2007; Trinitapoli and Weinreb 2012), and by the normative environments of schools (Harding 2010; Meier 2007; Poulin 2007a). These cultural models are overlapping and contradictory (Harding 2007; Sewell 1992; Swidler 2001); individuals both deliberately and instinctively select among an array of models when interpreting events or deciding upon a course of action (D'Andrade 1995; Vaisey 2009).

In sub-Saharan Africa, formal schooling is accompanied by extensive media campaigns linking sexual restraint and schooling success. Students are encouraged at every turn to postpone sex and marriage until they are finished with their education, and the ability to resist sexual temptations is central to the identity of an educated woman (Frye 2012; Grant 2012; Johnson-Hanks 2006; Lloyd and Mensch 2008; Vavrus 2003; Wight et al. 2006). Wight et al. (2006:990) describe how the expectation of pupil abstinence is among the most "fundamental sexual

norms” in rural Tanzania. In her analysis of differences in sexual behavior among in-school versus out-of-school youth in Malawi, Poulin (2007b:5) attributes lower levels of risky sexual activity among in-school women to their belief that “a better future awaits” those who avoid premarital sex, improving their chances of remaining in school. And Frye (2012) shows how delayed marriage and sexual abstinence are key elements of local understandings of educational success.

Not only is education connected to the ideal of sexual abstinence, women with different levels of education have also been shown to pursue unique ideals in their relationships once they have become sexually active (Frye and Trinitapoli 2013). Schools in sub-Saharan Africa have promoted ideals of companionate marriage and fidelity since their missionary beginnings (Caldwell et al. 1998a; Summers 1999). In contemporary Nairobi, highly educated youth explicitly distance themselves from the “average Kenyan” in their embrace of romantic love and companionate marriage, drawing examples from Western movies and television shows (Spronk 2012). Also in Kenya, Mojola (2008) reports that young Luo women distinguish between “relationships for school” and “relationships for sex.” And young educated women in Cameroon strive to rigorously manage their entry into motherhood and marriage; their ability to cultivate and demonstrate discipline in their romantic relationships in a context of unpredictability is the feat that endows educated women the “honorable” status they enjoy (Johnson-Hanks 2006).

While aspirations or intentions regarding sexual relationships have rarely been examined empirically in this context, the evidence that we do have suggests that differences in relationship ideals are predictive of later variation in sexual activity and relationship outcomes. A recent analysis of longitudinal data from Malawi shows that aspirations for timing of first marriage are predictive of levels of sexual activity; hoping to marry sooner was strongly correlated with initiation of sexual activity, recent level of sexual activity, and total number of lifetime sexual partners (Clark et al. 2009). Aspirations around marriage at the beginning of relationships were also found to be among the strongest predictors of later relationship stability and transitions to marriage among couples in Kenya (Clark, Kabiru, and Mathur 2010).

The large body of evidence showing that education is accompanied by exposure to specific ideals regarding sexual behavior and romantic love, along with that emerging research showing that variation in relationship ideals is associated with relationship-specific outcomes, leads to my second hypothesis:

*H3: If variation in relationship ideals is a mechanism through which educational attainment is correlated with differences in relationship experiences, then measures derived from respondents’ ideal sequences will mediate the statistical association between educational attainment and relationship sequence patterns.*

## **Differences in Social Positioning**

The third mechanism through which educational attainment may predict differences in women’s relationship sequences in Malawi is rooted in the social organization of sexual desire. Scholars have long recognized that romantic pairings are not random, but are instead

structured by inequalities operating in other realms of society, including race, educational attainment, and social class (Davis 1935; Hollingshead 1950; Reiss 1965; Waller 1937). The metaphor of the economic market is often employed in analyses of how sexual relationships are socially organized, with some individuals enjoying access to more (and more desirable) partners and others more constrained in their search (e.g.: Boulier and Rosenzweig 1984; Collins 1971; Laumann 1994; Lewis and Oppenheimer 2000; Raymo and Iwasawa 2005). Yet as Martin and George (2006:114) point out, the market approach is ill-suited for examining social systems of romantic attraction, because “analysts cannot separate the *price* of an object, its *utility* for a purchaser, its intrinsic *value*, and the object itself.” When applied to the sub-Saharan African context, the metaphor of sexual markets is further obfuscated by the fact that exchanges of gifts and money are fundamental to the establishment of trust and intimacy within social relationships, and are not reducible to economic transactions (Moore, Biddlecom, and Zulu 2007; Poulin 2007a; Swidler and Watkins 2007; Verheijen 2011).

In recent years, theorists of sexual relations have sought in Bourdieu’s theory of social fields an alternative framework for analyzing sexual behavior and romantic attraction (Brooks 2010; Green 2008; Martin and George 2006). Bourdieu’s (1996) use of the word “field” combines two senses: from the physical sciences, a field is space in which forces of attraction and repulsion create a metric of relative positioning, and from sports or battles, a field is a space in which individuals interact with each other according to a set of predetermined rules and individually specific roles (see also Martin 2003). Fligstein and Mcadam (2011:3) provide a concise definition of a social field: “a meso-level social order where actors (who can be individual or collective) interact with knowledge of one another under a set of common understandings about the purposes of the field, the relationships in the field (including who has power and why), and the field’s rules.” Each field generates a specific type of *capital*, a set of resources that are endowed with meaning by members and that structure the relative positions of actors vis-à-vis each other. The structure of the field is internalized through the *habitus*, “a system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a matrix of perceptions, appreciations, and actions” (Bourdieu 1977:82–83). Green (Green 2008:28) distinguishes the more general sexual fields from more specific sites of sexual interactions: “whereas the sites of sexual sociality constitute the observable spatial nodes of any given erotic world, sexual fields represent the structure of relations that underpin these sites and constitute their social structure.”

In a sexual field, capital takes a variety of forms, including physical traits such as eye color, breasts, and height, affective presentations such as makeup, jewelry, or hairstyles, and social reputation such as that of a cuckold, a flirt, or a respectable woman (Farrer 2010; Green 2013; Hakim 2011). While some of these characteristics are immutable and determined by genetic endowments, our perceptions of whether or not a person is attractive are strongly influenced by their presentation of self-- the extent to which their actions and fashions accentuate their natural endowments according to styles that are mutually agreed upon within their field (Goffman 1959). Some researchers view erotic capital as a currency operating independently of other forms of capital, and suggest that through investments in physical appearance and self-presentation, women can “exploit their erotic capital for social mobility” (Hakim 2011:121) and

“level existing social hierarchies” (Hofmann 2010:237). Most sociologists who employ this term, however, emphasize how the sexual field mirrors wider structures of power and domination, with erotic capital unequally distributed across the population (Collins 2004; England and McClintock 2009; Farrer 2010; Hamilton and Armstrong 2009). The sexual field is stratified into what Green (Green 2008:32) calls “tiers of desirability”, and these tiers of desirability reflect the social hierarchies in other realms of society—education, age, ethnicity, heteronormativity, and urban versus rural upbringing.

Evidence from the United States has consistently demonstrated that more educated and higher-class women are perceived as more physically attractive, on average. Elder (1969) examined longitudinal data on a cohort of white girls born in the early 1920s, and shows that middle-class youth were significantly more likely to be rated as physically attractive and having a “groomed appearance” than were their working-class peers. Taylor and Glenn (1976) find a significant correlation between educational attainment and perceived attractiveness, and find that education. Examining 129 newly married couples, Stevens, Owens, and Schaeffer (1990) find a high correlation between individuals’ educational attainment and researchers’ evaluations of their facial attractiveness. More recently, data from the Washington Longitudinal Study show that women who come from more advantaged backgrounds score higher on facial attractiveness measures (Jæger 2011).

Ethnographic studies in sub-Saharan Africa suggest that sexual social fields are similarly stratified in this context. In South Africa, rural migrants struggle to find partners willing to marry them, lacking stable employment and unable to afford a home large enough for two people (Hunter 2010). Educated young women in Madagascar turn their gazes outwards, seeking French men who come to the cities on vacations and business trips (Cole 2009). In Malawi, erotic capital is unevenly distributed even among sex-workers: “bargirls” interact with the same men each night and often form lasting relationships with their clients, while “freelancers,” who have less ability to negotiate with their clients and lack the institutional protection of a stable workplace, seek to establish emotional and physical boundaries between themselves and the men who come to them (Tavory and Poulin 2012).

Differences in educational attainment likely influence Malawian women’s relative positioning within the sexual social field through three interrelated processes. First, schools are centered on a set of practices that emphasize bodily restraint, propriety, and sexual virtue. From wearing modest and conservative uniforms to reciting songs about sexual abstinence, female students in particular are molded by schools into, disciplined, composed, and “civilized” women (Coe 2005; Comaroff and Comaroff 1997; Johnson-Hanks 2006). Second, teachers and school curricula repeatedly emphasize the need to maintain self esteem and confidence, and those who go further in school approach their adult lives with a greater sense of personal agency (Biraimah 1980; Frye 2012; Magnani et al. 2005; Meinert 2009; Stambach 2000). This combination of sexual composure and self-efficacy together produce a different way of carrying oneself—educated women are more likely to project a sense that they are special and deserve men who will treat them that way. And third, schools sort people into distinct social spaces in which more educated women are more likely to socialize with other educated individuals,



exposing them to different strategies of self-presentation (Caldwell 1980; Harrison, Cleland, and Frohlich 2008; Masemann 1974; Poulin 2007b).

To summarize, the theory of sexual fields posits that individuals are stratified into tiers of desirability according to sets of behavioral standards and physical attributes that are endowed with symbolic meaning by the actors within the field. Women who occupy more privileged positions within the sexual social field are more likely to be perceived as desirable or attractive by others. A more desirable woman in turn has access to more desirable men, both in terms of a these same socially structured tiers of desirability and also in terms of less perceptible characteristics—men who are more likely to ascribe to modern notions of egalitarian partnerships, or are less likely to be unfaithful. This theoretical framework, and evidence that formal schools influence the social organization of desire in sub-Saharan Africa, leads to my fourth hypothesis:

*H4: If differences in positioning in the sexual social field are a mechanism through which educational attainment is correlated with differences in relationship experiences, then measures reflecting the respondents' perceived attractiveness and the characteristics of their partners will mediate the statistical association between educational attainment and relationship sequence patterns.*

## DATA AND METHODS

### Sample

The data for the analysis come from Tsogolo la Thanzi (meaning “Healthy Futures” in Chichewa), a longitudinal survey designed to study how young people navigate the transition to adulthood in an AIDS epidemic.<sup>36</sup> Fifteen hundred female respondents and 600 male respondents were randomly selected from a sampling frame of 15 to 25 year olds living in census enumeration areas within 7 kilometers of Balaka, Malawi, a growing town about 90 km from the southern city of Blantyre.<sup>37</sup> One unique feature of TLT is the use of a centrally located research center for conducting interviews. Respondents came to the center and are interviewed in a private room where their responses could not be overheard by family members or neighbors. The relationship scripts instrument was administered as part of the fifth wave of TLT, fielded between October 1, 2010 and December 31<sup>st</sup>, 2010, to a total of 1,752 respondents.

Balaka is located in the Southern region of Malawi, which is characterized by lower levels of educational attainment and higher levels of poverty than the Northern and Central regions

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<sup>36</sup> TLT is designed by Jenny Trinitapoli and Sara Yeatman and funded by a grant (R01- HD058366) from the National Institute of Child Health and Human Development. For more information, visit <https://projects.pop.psu.edu/tlt>.

<sup>37</sup> The TLT survey was designed to allow for the sexual partners of female respondents to enter the sample through respondent-driven sampling; thus, our random sample of men is smaller than that of women. We weight all models to account for this asymmetrical sampling design.

(WHO 2012). Southern Malawi is also experiencing a more severe AIDS epidemic than the other two regions of the country: according to recent Demographic and Health Survey data, 15 percent of the population aged 15-49 in the southern region are infected with HIV, compared with a national prevalence of 11 percent (NSO-Macro 2011).

Because I am explicitly interested in how education shapes sexual relationships for women, I restrict my analysis to women who report having had sexual intercourse in the relationships they are referencing in the relationship scripts module. And because I am interested in the position of sex relative to other relationship events, I exclude women who report fewer than five events in their relationships. My analytic sample is 916 women. For descriptive statistics about the sample, see Table 7.

### **Relationship Sequence Data**

To learn about the sequences of events that are idealized and actualized by young Malawians, I adapted the relationship scripts method—a hybrid between in-depth interviewing and structured surveys. This method, pioneered by Bearman, Jones, and Udry (1997) as part of the National Longitudinal Survey of Adolescent Health (Add Health) in 1994 and 1996, is a card-sort technique in which respondents are asked to work with a set of cards, each depicting a typical event in a romantic relationship (Harding 2007; O’Sullivan et al. 2007). Respondents are asked to use these cards to describe sequences of events in relationships.

Through an iterative process including preliminary qualitative interviews and focus group discussions with 17 young adults living near the survey site, ongoing discussions with local research assistants, and a three-day long pilot study with a sample of 89 respondents from a nearby town, I developed a set of relationship steps that are both common and significant to young adults in rural Malawi. A local artist illustrated the relationship steps with a series of simple cartoon drawings; these pictorial depictions facilitated this exercise for illiterate and semiliterate respondents (see Figure 2). Because some of the statements are gender-specific (e.g., *“I would give her a present”* versus *“I would give him a present”*), the artist provided two parallel sets of illustrated cards—one for men and one for women.

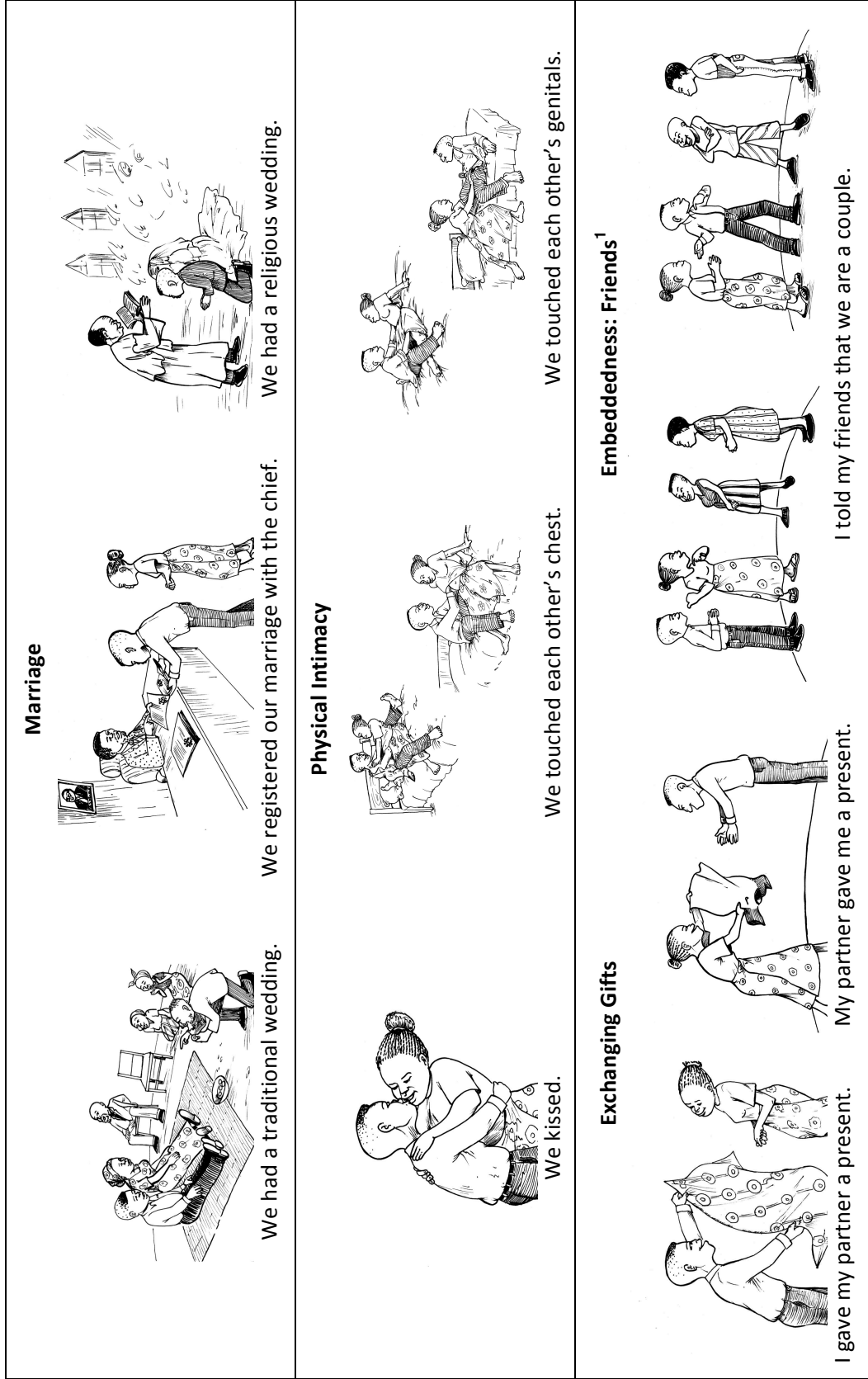
**Table 7: Descriptive Statistics of Sample**

VARIABLES	Mean/Percent (s.d.)	Min	Max
Education			
Highest Year Attended	7.44 (2.78)	2	12
Currently In School	6.77%		
Socio-demographic Controls			
Age	21.57 (2.96)	16	26
SES Score	-0.43 (2.19)	-3.37	8.13
Distance from Town (Standardized)	0.10 (0.95)	-1.27	4.33
Attends Religious Services at Least Weekly	63.39%		
Religious Affiliation			
Protestant	43.02%		
Catholic	33.41%		
Muslim	23.57%		
Relationship History Controls			
Married	71.62%		
Relationship Duration (Years)	4.75 (3.20)	0.25	14.09
Age at First Sex	15.85 (2.28)	10	22
Actual Relationship Sequence Characteristics			
Actual Sequence Length	15.31 (3.22)	8	21
Optimal Matching Distance Score	1.37	0.12	1.87
Sequential Order of Sex Card	9.01 (3.98)	1	20
Meet Both Sets of Parents Before Sex	59.27%		
At Least 2 Friend/Community Events Before Sex	10.76%		
<i>N</i>	874		

**Table 7 (Continued)**


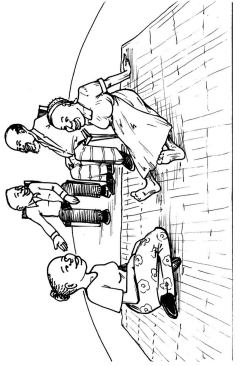

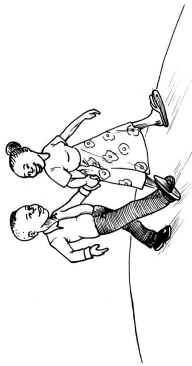
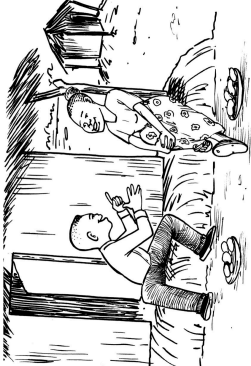

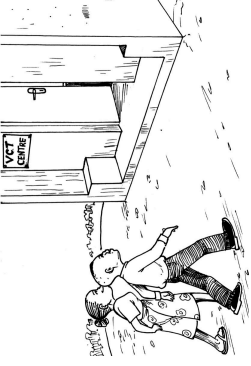
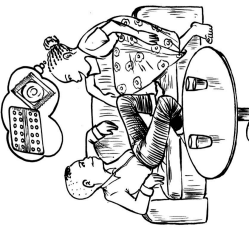

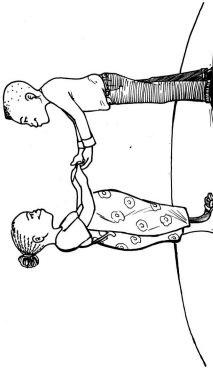
VARIABLES	Mean/Percent (s.d.)	Min	Max
Literacy			
Low	26.10%		
Medium	47.28%		
High	26.62%		
Numeracy			
Low	33.87%		
Medium	44.39%		
High	21.74%		
Ideal Relationship Sequence Measures			
Ideal Sequence Length	12.64 (5.54)	1	21
Sequential Order of Sex Card	10.78 (4.35)	1	20
Meet Both Sets of Parents Before Sex	83.75%		
At Least 2 Friend/Community Events Before Sex	22.08%		
Position in Sexual Social Field			
Average Attractiveness Score	2.44(0.43)	1.4	4
Hair Professionally Styled	35.60%		
Partner Finished Secondary School or Higher	52.97%		
Egalitarian Relationship	27.92%		
<i>N</i>	874		

Figure 2: Relationship Scripts Card Illustrations and Categories<sup>1</sup>



<sup>1</sup> Only one of these cards was used in the relationship scripts module, depending on the gender of the respondent.

Figure 2 (Continued)

<p><b>Embeddedness: Parents</b></p>  <p>I introduced my partner to my his relatives.</p>  <p>My partner introduced me to relatives.</p>	<p><b>Embeddedness: Community</b></p>  <p>We attended a community event together.</p>  <p>We walked around alone together as a couple.</p>
<p><b>Family Formation Decisions</b></p>  <p>We started living together.</p>  <p>We decided to get married</p>	<p><b>Sexual and Reproductive Health</b></p>  <p>We went for HIV testing and discussed our status.</p>  <p>We talked about contraception.</p>
<p><b>Sexual Intercourse</b></p>  <p>We had sex.</p>	<p><b>Pregnancy</b></p>  <p>I got pregnant.</p>

The relationship scripts instrument proceeds as follows. First, the interviewer hands the respondent the stack of cards and asks her to sort them into two piles in reference to her current or most recent relationship: the steps she has experienced and the ones she hasn't. Second, the interviewer asks the respondent to order the "yes" cards to tell the story of her relationship with this specific partner; I refer to this as her realized sequence. After answering some additional questions pertaining to this relationship, the respondent is then asked to imagine that she is giving advice to a same-sex friend or relative who is around the same age as she is and is not yet in a relationship. With this person in mind, she is asked to return to the full set of cards and order them (as she did with the story of her own relationship) to reflect what she would wish for this person to experience in a new relationship "if everything worked out exactly as she would want it to." I refer to this relationship script as her ideal sequence.

The sequences examined here include a total of 20 cards. To simplify the complexity of the sequences for the optimal matching analyses, I combined substantively similar cards into categories, resulting in 10 different types of events (see Figure 2). Descriptive statistics for the relationship sequences are provided in Table 7.

## Measuring Variation in Relationship Sequences

I use three different measures to examine variation in relationship sequences. First, I use optimal matching and hierarchical clustering to uncover the most salient groupings of sequences in the data. These techniques allow me to reduce the complexity of the relationship scripts, while still retaining the sequential nature of the data rather than isolating specific events. I describe these methods briefly here; more information about the specific algorithms used, as well as validation tests for the clustering results, is provided in the methodological appendix (Appendix 3). Second, I construct a variable measuring the sequential order of sexual intercourse, or the number of cards placed before the sex card for each respondent. And third, I construct a binary measure indicating whether or not a respondent has placed a wedding card before the sex card.

Optimal matching algorithms estimate the distance between pairs of sequences in terms of the changes necessary to convert one sequence into the other (Abbott and Hrycak 1990; Abbott and Tsay 2000; Aisenbrey and Fasang 2010; Lesnard 2010). There are two fundamental types of changes: "*indel*" (i.e., inserting and deleting cards)<sup>38</sup> and substitution (i.e., exchanging one card for another). Each change is assigned a cost, and the algorithm tries all possible combinations of these two types of changes and selects the combination with the minimum total cost, or distance score. The output of the optimal matching algorithm is a dissimilarity matrix, composed of distance scores for each pair of sequences in the sample. I then use this dissimilarity matrix to group the sequences into clusters that are similar to each other using

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<sup>38</sup> Deleting an element from one sequence and inserting an element into the other sequence are considered equivalent when calculating the distance between two sequences.

Ward's clustering algorithm.<sup>39</sup> This process begins by assigning each sequence to its own separate cluster. The algorithm merges the most similar pair of clusters each step, and the data are grouped into progressively smaller numbers of clusters until at the end all of the sequences share a common cluster. In selecting the optimal number of clusters, I used a series of cluster validation indexes and visual representations of the sequences within each cluster. The optimal matching and cluster analysis produce a set of five discrete clusters of respondents with relatively similar relationship experiences.

In addition to the clusters, I also use two more straightforward measures of variation between the relationship sequences: the sequential order of the sex card and the ordering of sex and wedding ceremonies. The sequential order of the sex card is simply the number of cards placed before sex; all models using this variable control for the number of cards that a respondent places in her sequence. And the ordering of sex and weddings is captured using a binary variable differentiating between women who place at least one wedding card before sex, and those who do not. These two measures were selected based on visual and descriptive analyses of the cluster results, which revealed that the placement of sexual intercourse within the relationship sequences as a whole and relative to weddings are among the most salient distinctions between the different clusters.

## **Educational Status**

To measure educational status, I use the highest level of school that a respondent ever attended. In Malawi, students attend eight years of primary school (Standard 1-8), two years of junior secondary school (Form 1-2), and two years of senior secondary school (Form 3-4). Because fewer than 8 respondents attended post-secondary education in the TLT sample of 1,752, I do not differentiate between completed secondary and higher education. Respondents were asked about their educational experiences at each wave of the survey; if they were out of school at wave one, they are simply asked whether they have been to school in the past four months since they were last interviewed. During wave seven, a detailed educational history questionnaire was administered to all survey respondents; these data were used to validate the reported highest level attended and the 23 discrepant cases were examined by hand. The models also include a dummy variable distinguishing respondents who are currently in school.

## **The Three Mechanisms**

I use two variables to test whether differences in cognitive skills might mediate the observed relationship between educational experiences and relationship sequences. In wave seven, respondents were led through a set of exercises designed to measure their literacy and numeracy. In the literacy portion, they were led through a series of exercises designed to test

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<sup>39</sup> I tried two other clustering algorithms (weighted average and partitioning around medoids) before selecting Ward's as the algorithm delivering the most informative clustering for these data. Results available upon request, see Appendix 3 for more information.



how well they are able to read and interpret increasingly complex passages, from brief sentences to longer paragraphs. At the end, the interviewer is asked to rate the respondent's reading ability. I use this overall rating as my measure of literacy.<sup>40</sup> In the numeracy portion, respondents are given a pen and paper and verbally asked a set of math problems related to working with money, including making change, estimating wages, and calculating interest rates. I use a scale based on the number of questions that the respondent answered correctly in five minutes.

To examine whether differences in relationship ideals might help to explain differences in relationship sequences by educational status, I use the relationship sequences that respondents provided when they were asked to describe how a relationship would unfold under ideal circumstances (described above). I consider an extensive set of 29 measures of ideal sequences as potential mediators. These measures are the same ones that are used to describe differences in the relationship clusters, and are listed in Table 8.

I conceptualize positioning within the sexual social field using two interrelated dimensions—respondents' desirability or attractiveness and the characteristics of their partners, and I use two different measures for each dimension. First, at each wave, interviews were asked to rank the respondent's physical attractiveness relative to other persons of about the same age and sex, using a 4-point scale. This question is asked at the end of the interview, and it was initially included in order to provide a way of examining interviewer effects—whether interviewers behave differently towards respondents who they consider attractive. For my purposes, this variable offers a measure of socially mediated perceptions of attractiveness. The interviewers for this project are all from around Balaka and have completed at least secondary school, so this provides a measure of how an educated person rates respondents' overall attractiveness. I average attractiveness ratings across the five waves. I also use a binary variable describing whether or not the respondent had her hair professionally styled, either straightened or with hair extensions. Hairs salons in Malawi are ubiquitous, even in rural areas, so much so that when female condoms were first released, they were introduced through a social marketing campaign in which hair stylists would explain about the female condom to their clients. But getting one's hair professionally styled requires extra money and resources to spend on nonessential goods, and so this measure gives a sense of whether or not the respondent styles herself in terms of more cosmopolitan fashions.

I use 2 measures of partner characteristics- whether or not the partner has ever finished secondary school, and whether or not the respondent reports being in an egalitarian relationship, which I represent by stating "yes" to at least four of the following five statements: "I have my own money to buy things I want," "I can buy items without my partner's approval," "My partner and I discuss important matters together," "I initiate sex with my partner if I want to have sex," and "In our relationship, we have equal control."

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<sup>40</sup> I also experimented with different combinations of answers to the specific questions, and the results were similar.

## Other Variables of Interest

The multivariate models include controls for key socio-demographic factors that previous literature establishes as known correlates of sexual behavior: age (measured in years), household wealth (a score constructed using principal components analysis of 20 household goods, personal possessions, and housing attributes), religiosity (measured using a binary variable identifying respondents who report attending religious services at least weekly), religious affiliation (a categorical variable distinguishing between Catholic, Protestant, and Muslim respondents), and rurality (measured as a function of distance to Balaka's main market, standardized to aid interpretation). In addition, I control for three measures of relationship history: marital status (a binary variable for currently married respondents),<sup>41</sup> age at first sex, and relationship duration (measured in years).

## Analytic Approach

After introducing these three different measures of sequence variation, I turn to my first hypothesis—that differences in educational attainment are correlated with differences in relationship sequences. To test this hypothesis, I begin with bivariate analyses. I then examine whether these relationships remain after controlling for other respondent characteristics. Specifically, I use multinomial logistic regression models to predict membership in the different clusters, ordinary least squares regression to predict the sequential order of the sex card in the sequences, and logistic regression to predict placing sex before marriage.

In examining the three hypothesized mechanisms—that cognitive skills, relationship ideals, and positions in the sexual social field mediate the documented associations between educational experiences and sexual relationship sequences—I again use a combination of bivariate and multivariate approaches. In particular, I seek to determine whether these three mechanisms mediate the association between educational attainment and the sequential position of sexual intercourse within relationship sequences, or whether the pathways running through each hypothesis in Figure 1 help to explain the overall association between educational status and the relationship sequence measures. My examination of the three hypothesized mechanisms is guided by the four criteria commonly recognized as necessary for a mechanism to act as a mediator (Baron and Kenny 1986; MacKinnon, Fairchild, and Fritz 2007)<sup>42</sup>:

1. The independent variable (educational status) must be a significant predictor of the dependent variable (the relationship sequence measure) in the absence of the mediator.

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<sup>41</sup> For the analyses predicting relationship cluster membership and sex before marriage, I do not include marital status.

<sup>42</sup> The comparison of direct and indirect effects rests on the assumption that the primary direction of causality runs from educational status to relationship sequence patterns. I confirmed that this is true using a series of robustness checks, which are discussed in the methodological appendix (Appendix 3).

2. The independent variable (educational status) must be a significant predictor of the mediator.
3. The mediator must be a significant and unique predictor of the dependent variable (relationship sequence measure).
4. The magnitude of the association between the independent variable (educational status) and the dependent variable (sexual activity) must shrink upon the addition of the mediator to the model.

I test these criteria in turn and rule out those mechanisms that fail to fulfill each criterion. To test the fourth criterion, I calculate the indirect effect—or the component of the effect of educational status that operates through the mediator variable— by multiplying the effect of educational status on the mediator ( $\beta_a$  in Figure 1) with the effect of the mediator on the outcome ( $\beta_b$ ), with the socio-demographic and relationship history control variables included as covariates. The significance of the indirect effects are tested using the Sobel-Goodman mediation test (Sobel 1982), with standard errors estimated using bootstrap resampling with 1,000 replications.

## RESULTS

### Variation in Relationship Sequences

The optimal matching and cluster analysis reveal five clusters of relationship sequences describing respondents' actual experiences, ranging in size from 98 respondents to 315 respondents. For ease of interpretability, I give each cluster a name that describes the most salient characteristics differentiating this cluster from others. The columns in Table 8 present the mean values of several attributes of relationship sequences for each cluster. For each variable, the values shown in bold differ significantly from those for all other clusters ( $p < 0.05$ , two-tailed tests). Visual representations of the sequences in each cluster are provided in Figures 3-5. These graphs are known as sequence index plots, and provide insight into how events are distributed differently between these different clusters. They depict random samples of 80 women from each cluster, with each horizontal line representing a woman's relationship sequence. The number of events in the sequences is given on the x-axis.

**Table 8: Attributes of Relationship Sequences by Cluster, Mean/Percent (sd)**

	Waiting and Dating	Village Wedding	Modern Romance	Early Sex	Delayed Sex then Marriage
Length of Sequence	16.41 (0.18)	15.96 (0.16)	<b>12.40</b> <b>(0.28)</b>	<b>13.64</b> <b>(0.36)</b>	15.94 (0.21)
Rank of Sex Card	<b>12.18</b> <b>(0.23)</b>	8.85 (0.19)	<b>9.91</b> <b>(0.24)</b>	<b>3.68</b> <b>(0.19)</b>	8.01 (0.29)
<b>Marriage</b> (Traditional, civil, religious wedding)					
Rank of cards	<b>8.72</b> <b>(0.16)</b>	<b>5.02</b> <b>(0.15)</b>	13.56 (0.59)	11.55 (0.52)	11.99 (0.24)
# of Cards	1.98 (0.05)	1.99 (0.04)	<b>0.36</b> <b>(0.07)</b>	<b>0.74</b> <b>(0.09)</b>	<b>1.63</b> <b>(0.07)</b>
Marry before sex	<b>89.45%</b>	<b>81.59%</b>	5.04%	2.04%	<b>18.07%</b>
Marry in sequence	98.17%	93.97%	<b>21.85%</b>	<b>46.94%</b>	<b>83.73%</b>
<b>Parents</b> (Each meet other's parents)					
Rank of cards	<b>5.05</b> <b>(0.15)</b>	<b>3.91</b> <b>(0.12)</b>	7.49 (0.45)	8.36 (0.39)	8.09 (0.23)
Both cards before sex	89.45%	81.90%	27.73%	<b>6.12%</b>	35.54%
Both cards in sequence	95.87%	94.92%	<b>45.37%</b>	<b>73.47%</b>	93.37%
<b>Other Physical Intimacy Events</b> (Kiss, touch chest, touch genitals)					
Rank of cards	<b>11.88</b> <b>(0.23)</b>	<b>11.04</b> <b>(0.20)</b>	8.05 (0.22)	<b>6.03</b> <b>(0.35)</b>	8.32 (0.30)
# of cards before marriage	0.35 (0.05)	0.24 (0.04)	<b>2.22</b> <b>(0.09)</b>	1.83 (0.11)	1.57 (0.09)
# of cards before sex	1.76 (0.08)	0.53 (0.05)	<b>2.10</b> <b>(0.09)</b>	0.76 (0.09)	1.30 (0.08)
# of cards in sequence	2.11 (0.07)	1.90 (0.06)	2.30 (0.08)	2.11 (0.10)	2.15 (0.08)
Sex 1 <sup>st</sup> phys. int. event	18.35%	<b>59.71%</b>	<b>1.69%</b>	29.59%	12.05%
<b>Friend and Community</b> (Meet friends, attend public event, hold hands in public)					
Rank of cards	7.49 (0.26)	<b>9.75</b> <b>(0.21)</b>	<b>4.83</b> <b>(0.21)</b>	8.18 (0.34)	6.73 (0.28)
# of cards before sex	1.50 (0.06)	<b>0.86</b> <b>(0.04)</b>	<b>2.15</b> <b>(0.08)</b>	<b>0.46</b> <b>(0.07)</b>	1.32 (0.07)
# of cards in sequence	2.19 (0.06)	<b>1.82</b> <b>(0.05)</b>	<b>2.61</b> <b>(0.06)</b>	<b>1.19</b> <b>(0.08)</b>	2.21 (0.06)
<i>N</i>	218	315	119	98	166

**Table 8 (Continued)**

	Waiting and Dating	Village Wedding	Modern Romance	Early Sex	Delayed Sex then Marriage
<b>Exchanging Gifts</b> (Each give the other a gift)					
Rank of cards	7.16 (0.25)	<b>10.87</b> <b>(0.22)</b>	5.16 (0.26)	7.74 (0.35)	5.82 (0.26)
Receive gift immediately before phys. Int. event	<b>13.76%</b>	27.30%	20.05%	<b>53.61%</b>	27.11%
<b>Family Formation Decisions</b> (decide to get married, live together)					
Rank of cards	6.44 (0.15)	5.46 (0.13)	6.24 (0.41)	7.59 (0.36)	8.39 (0.23)
Both cards before sex	<b>77.06%</b>	<b>60.01%</b>	3.36%	1.02%	<b>15.66%</b>
# of cards in sequence	1.92 (0.02)	1.93 (0.01)	<b>0.66</b> <b>(0.05)</b>	1.33 (0.08)	1.83 (0.03)
<b>Sexual and Reproductive Health</b> (get HIV tests, discuss contraception)					
Rank of HIV testing	6.12 (0.37)	8.36 (0.38)	5.05 (0.64)	8.80 (0.98)	8.13 (0.61)
Rank of contraception	14.72 (0.26)	12.64 (0.23)	11.40 (0.79)	11.58 (0.79)	14.26 (0.33)
Both cards before sex	9.63%	6.03%	6.72%	2.04%	4.82%
Include HIV testing in sequence	59.63%	54.28%	33.61%	31.71%	52.41%
Include contraception in sequence	83.57%	79.68%	<b>35.29%</b>	<b>54.08%</b>	77.71%
<b>Pregnancy</b>					
Rank of card	<b>14.10</b> <b>(0.23)</b>	11.56 (0.21)	12.05 (0.41)	<b>7.96</b> <b>(0.48)</b>	12.08 (0.32)
Include card in sequence	86.24%	92.06%	<b>33.61%</b>	<b>68.28%</b>	87.35%
<i>N</i>	218	315	119	98	166

Figure 3: Sequence Index Plot Showing Sex and Marriage, Realized Relationship Sequences

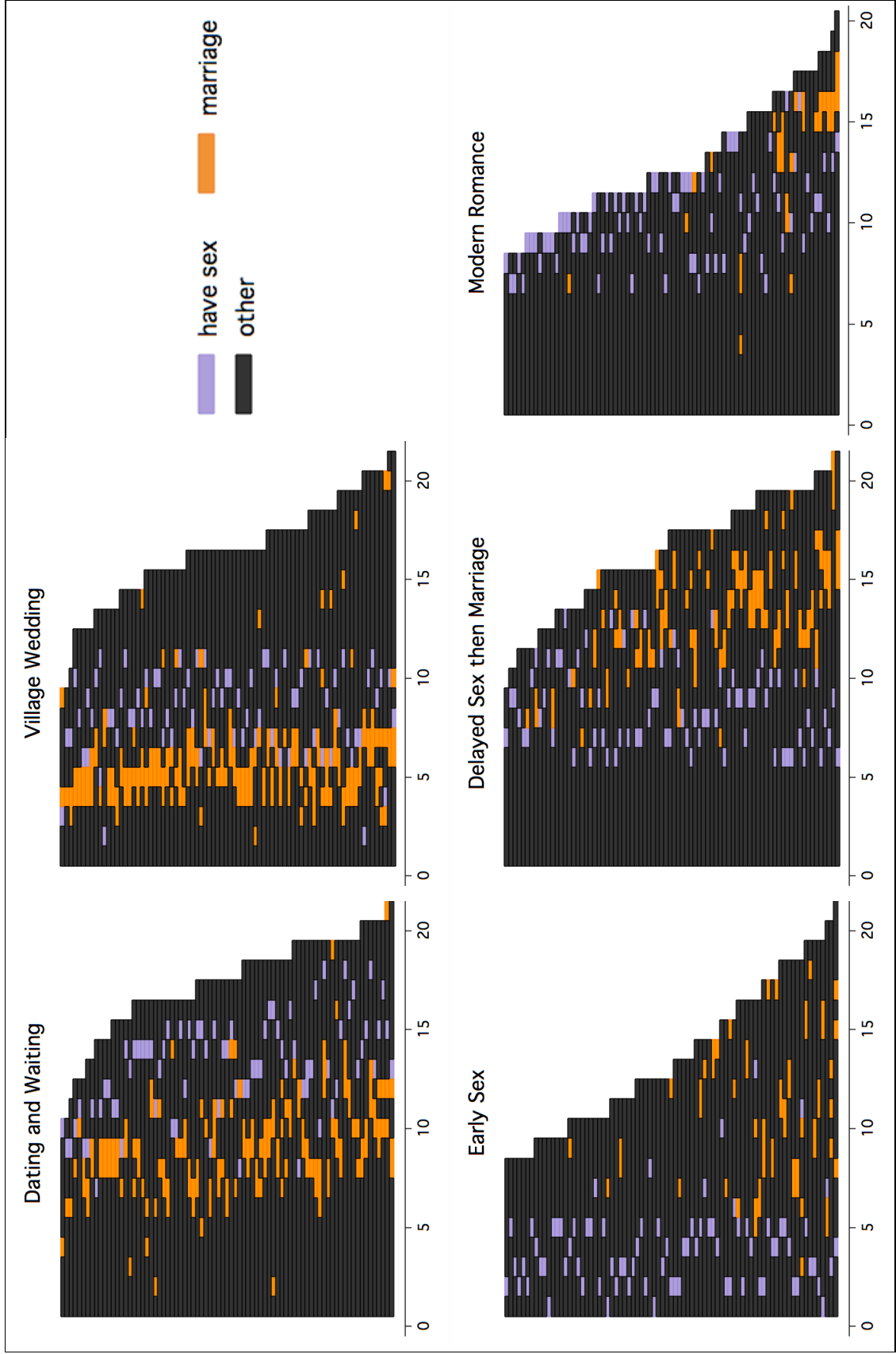


Figure 4: Sequence Index Plot Showing Sex, Marriage, and Meeting Parents, Realized Relationship Sequences

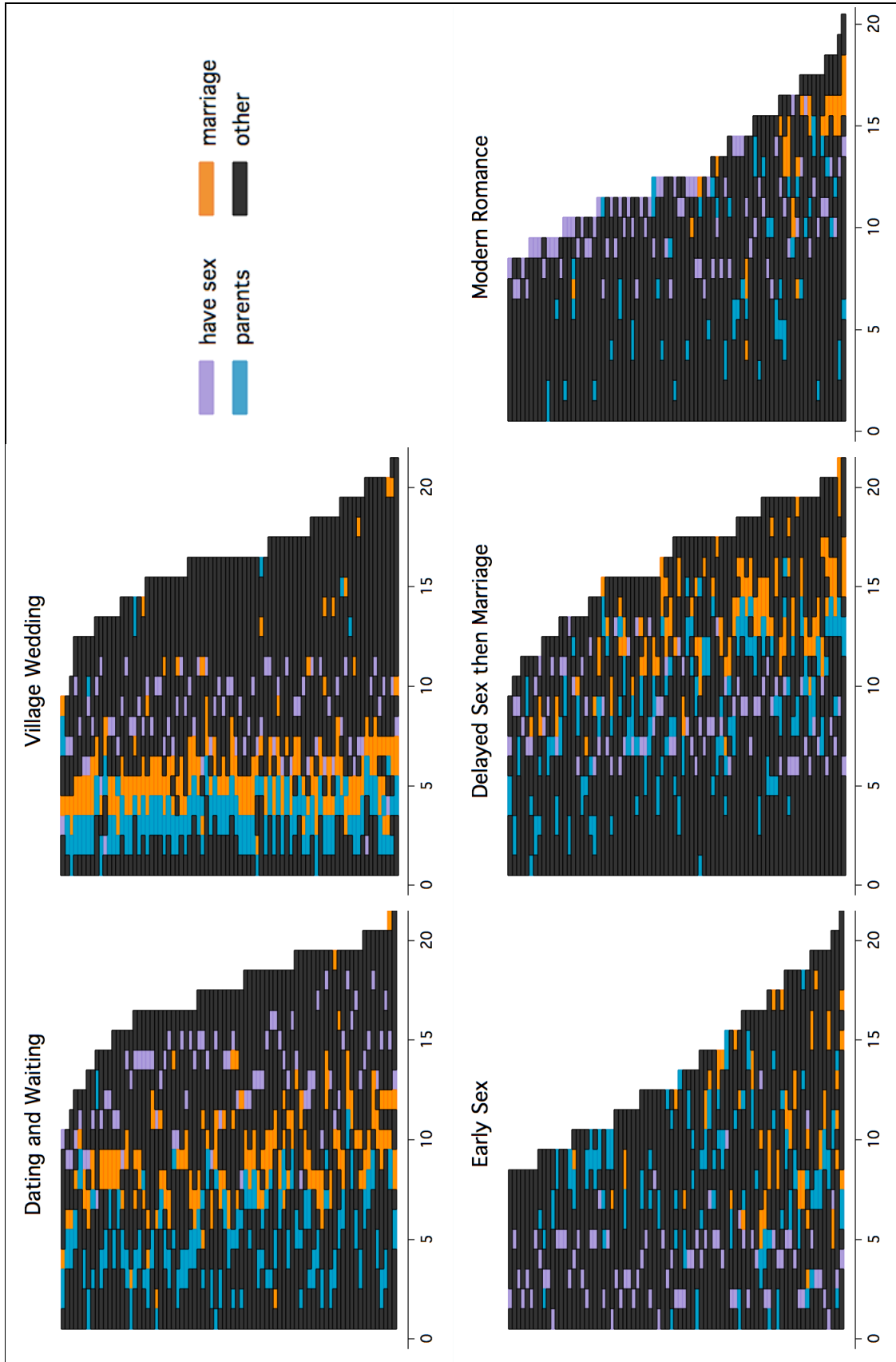
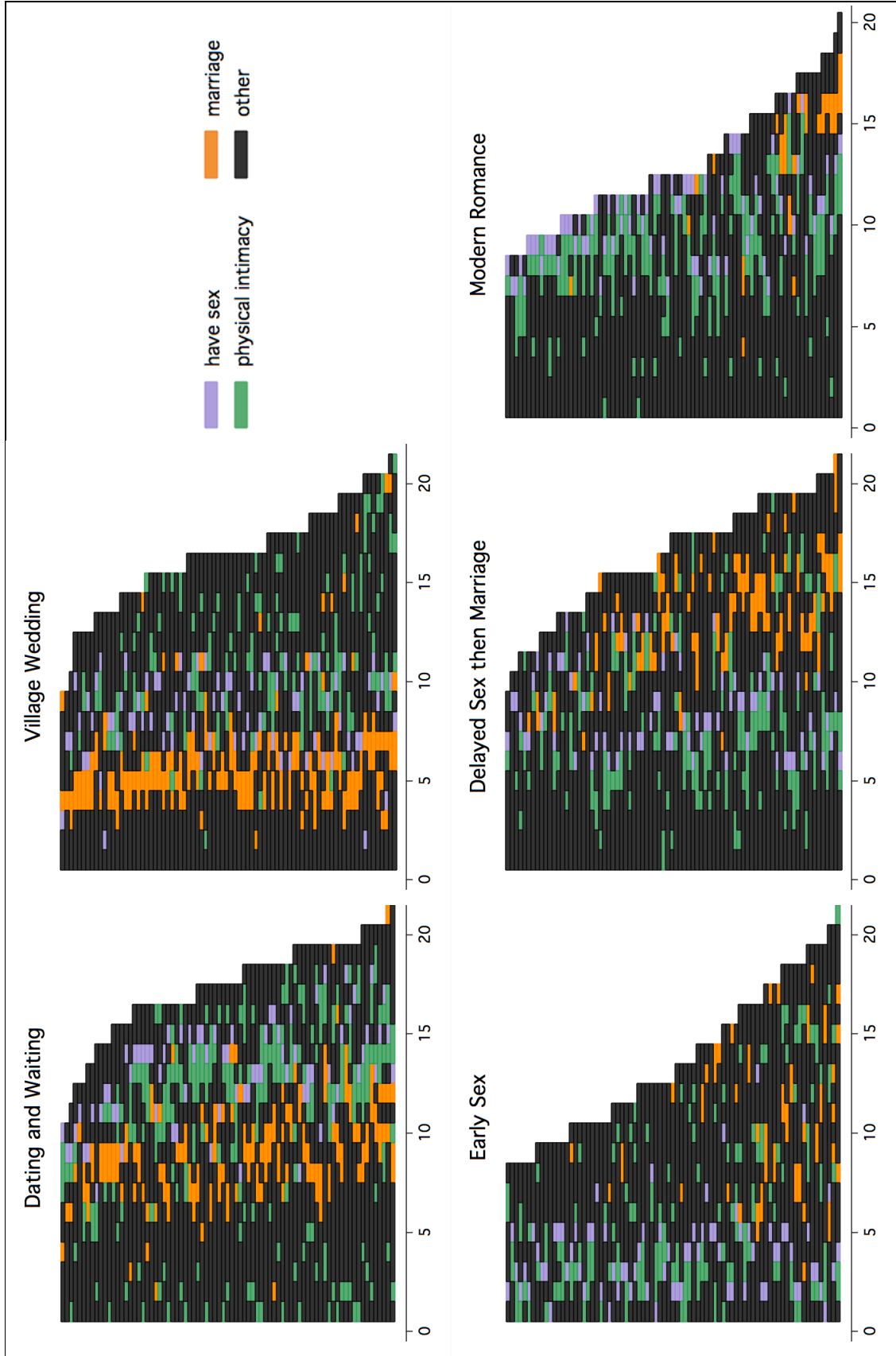


Figure 5: Sequence Index Plot of Sex, Marriage, and Physical Intimacy: 5 Cluster Solution, Realized Relationship Sequences





Two major axes of contrast separate the different clusters— the number of events that take place before sex and the relative order of sex and marriage. At the coarsest level of hierarchical clustering, the relationship sequences are divided into two groups with distinct orderings of sexual intercourse and wedding events (see Appendix 3, Figure A2). Two clusters—Dating and Waiting and Village Wedding— are primarily composed of women who report having sex for the first time with their partners after they have experienced at least one wedding event in their relationships. On the other hand, the remaining three clusters—Modern Romance, Early Sex, and Delayed Sex then Marriage are primarily composed of women who report having sex with their partners before marriage. Within each of these two overall categories, the clusters vary considerably in terms of the sequential position of the sex card. Specifically, Village Wedding and Early Sex are both characterized by sex occurring relatively early in the sequences, while relatively more events are placed before sex in the sequences in the Dating and Waiting and Modern Romance clusters. I describe each cluster in more detail before moving on to explore how educational status is associated with these different patterns of relationship sequences.

The first two clusters, which I refer to as Dating and Waiting and Village Wedding are both almost entirely comprised of women who are married, and over 80 percent of women in both clusters report having married before having sex with their partners. Compared with the other three clusters, these women tend to report introducing their partners to their parents (and vice versa) relatively earlier in their sequences. Women in these two clusters are also more likely to place the cards representing HIV testing and discussing contraception in their sequences, compared with women in the other three relationship clusters. Finally, most respondents in both clusters include pregnancy as one of the relationship events that they experienced with their partner.

Despite these similarities, however, the Dating and Waiting and Village Wedding clusters look quite different when we consider other aspects of their relationship experiences. Most strikingly, women in the Dating and Waiting cluster tend to place marriage considerably later in their sequences— almost four events later, on average, than women in the Village Wedding cluster. They also place significantly more cards before that representing sexual intercourse than do respondents in other clusters. Indeed, true to their name, these women experience several key events with their partners— including friend and community events, exchanging gifts, and other types of physical intimacy—while still “waiting” to have sex until after marriage. On the other hand, as can be seen in Figure 4, women in the Village Wedding cluster tend to place marriage quite early in their relationships, and typically include both cards involving meeting parents immediately before the marriage cards. The consistency with which these cards precede wedding events suggests that these parental introductions are part of the marriage process itself. When we take this into account, those in the Village Wedding cluster get married extremely early in their relationships, often after only one or two other events. I refer to this cluster as Village Wedding after the courtship and marriage system still practiced in rural areas, known in Chichewa as *chikole*, in which a man presents himself to the bride’s family and during that initial meeting asks for permission to marry her, with a wedding ceremony following shortly thereafter (Mair 1951).

In addition to these different paces of marriage and sexual intercourse, these two clusters contrast in other important ways. For example, for more than half of the women in the Village Wedding cluster, sexual intercourse is the first physical intimacy event they report experiencing with their partners— they place the sex card before kissing, touching the chest, and touching the genitals. On the other hand, only 18 percent of women in the Dating and Waiting cluster place sex before other physical intimacy cards. Exchanging of gifts also appears to unfold quite differently between these two clusters. While women in the Village Wedding cluster place the cards denoting exchanging gifts significantly later in their sequences than women in the other four clusters, women in the Dating and Waiting cluster place these cards on average 3 cards earlier in their sequences. Women in the Dating and Waiting cluster are also significantly less likely than women in other clusters to place the card representing receiving a present from their male partner immediately before a card showing physical intimacy, a sequence similar to the “transactional sex” model that has received considerably attention in HIV prevention efforts in the region (Esacove 2012; Swidler and Watkins 2007; Verheijen 2011).

In the remaining three clusters (Modern Romance, Early Sex, and Delayed Sex then Marriage), over 80 percent report having sex with their partners before experiencing any of the three types of weddings depicted using the cards. The women in all three clusters are also less likely to announce the relationship to both sets of parents before having sex. These are the only attributes that are similar across all three categories. Women in the Modern Romance cluster are the least likely to report any kind of wedding ceremony during their sequences, and they place sex significantly later in their sequences than do women in the other two “sex before marriage” clusters. The relationships that these women report reflect the “Western-style” narratives frequently invoked in newspaper gossip columns and radio shows— postponing sex until after a number of other relationship events, including other types of physical intimacy, exchanging gifts, and spending time with friends and in the community. In this sense, Modern Romance sequences are similar to the sequences in the Dating and Waiting cluster described above. But relationships classified as Modern Romances are perhaps most notable for what they do not include: events leading to family formation— meeting each other’s parents, discussing marriage, moving in together, weddings, and pregnancy. Sequences in this cluster include significantly fewer of all of these events than any other cluster.

In the early stages, relationship sequences that make up the Delayed Sex then Marriage cluster appear similar to those in the Modern Romance cluster in many ways. These women also place several events before having sex with their partners, though not as many as in the Modern Romance cluster (seven on average versus nine for Modern Romance). They typically exchange gifts, experience other types of physical intimacy and spent time together with friends and in public before having sex, although they average one of each type of event before sex while women in the Modern Romance cluster average two. In the later stages of their sequences, however, women in the Delayed Sex then Marriage cluster report experiencing many of the events that lead towards the more traditional role of wife and mother, events which are absent from the Modern Romance sequences. While only a minority experience each type of event before having sex in their relationships, the overwhelming majority of women in this cluster will

get married and move in with their partners, introduce the relationship to both sets of parents, talk about contraception and have a child together.

Relationships characterized as Early Sex are quite distinct from all other relationship sequences discussed here. True to the name given to this cluster, sex occurs very early in these relationship sequences, as the third or fourth event on average. More than half of the sequences in this cluster include a progression that might be interpreted to signify transactional sexual encounters, with the card depicting a woman receiving a gift from her partner placed immediately before physical intimacy in the sequence (Esacove 2012). These partnerships are also considerably less socially embedded than are sequences in other clusters, as evidenced by their low likelihood of announcing the relationship to both sets of parents before having sex and the paucity of events involving spending time with friends or in the community— both before sex and in these sequences as a whole. While most of the relationships that fall into this category are ongoing, a higher proportion of them has ended (26 percent versus 6 percent for the rest of the sample) or is described as infrequent partners (14 percent versus less than 2 percent for the rest of the sample). Yet for most of the women in this cluster, these relationships have long-lasting consequences: over two-thirds of the sequences include a pregnancy. And over 80 percent of these women report that they decided to get married, though fewer than half actually do get married according to their sequences.

The optimal matching and cluster analysis do not form clean and concise boundaries between groups, and these descriptions should be interpreted as general patterns rather than accurate portrayals of specific cases. Each cluster contains sequences that conform to the typical ordering and composition of events in some ways but are anomalous in other ways. For example, a woman who reports having a religious wedding in the middle of a series of physical intimacy and friend/community events preceding the sex card might fall into the Modern Romance cluster. Another might have sex relatively early but fall in the Village Wedding cluster because of the sequence of meeting both parents followed immediately by multiple wedding ceremonies. Yet when we compare the statistics in Table 8 and the graphs displayed in Figures 3-5, it is clear that these clusters represent real variation in the ways that relationships unfold in Malawi. This variation extends beyond the ordering of the “landmark” events typically asked about in public health and demographic surveys, including sex, marriage, and pregnancy. For example, while both the Village Wedding and Dating and Waiting clusters are characterized by abstinence before marriage, relationships in these clusters differ in other key ways — sequences in the Village Wedding cluster typically involve marriage as one of the first events in the relationship, and sex often occurs prior to other types of physical intimacy, while for women in the Dating and Waiting cluster, marriage generally takes place after a number of other events that the couple experiences together, including other types of physical intimacy. These different constellations of other events likely imbue sex and marriage with different subjective meanings and material conditions.

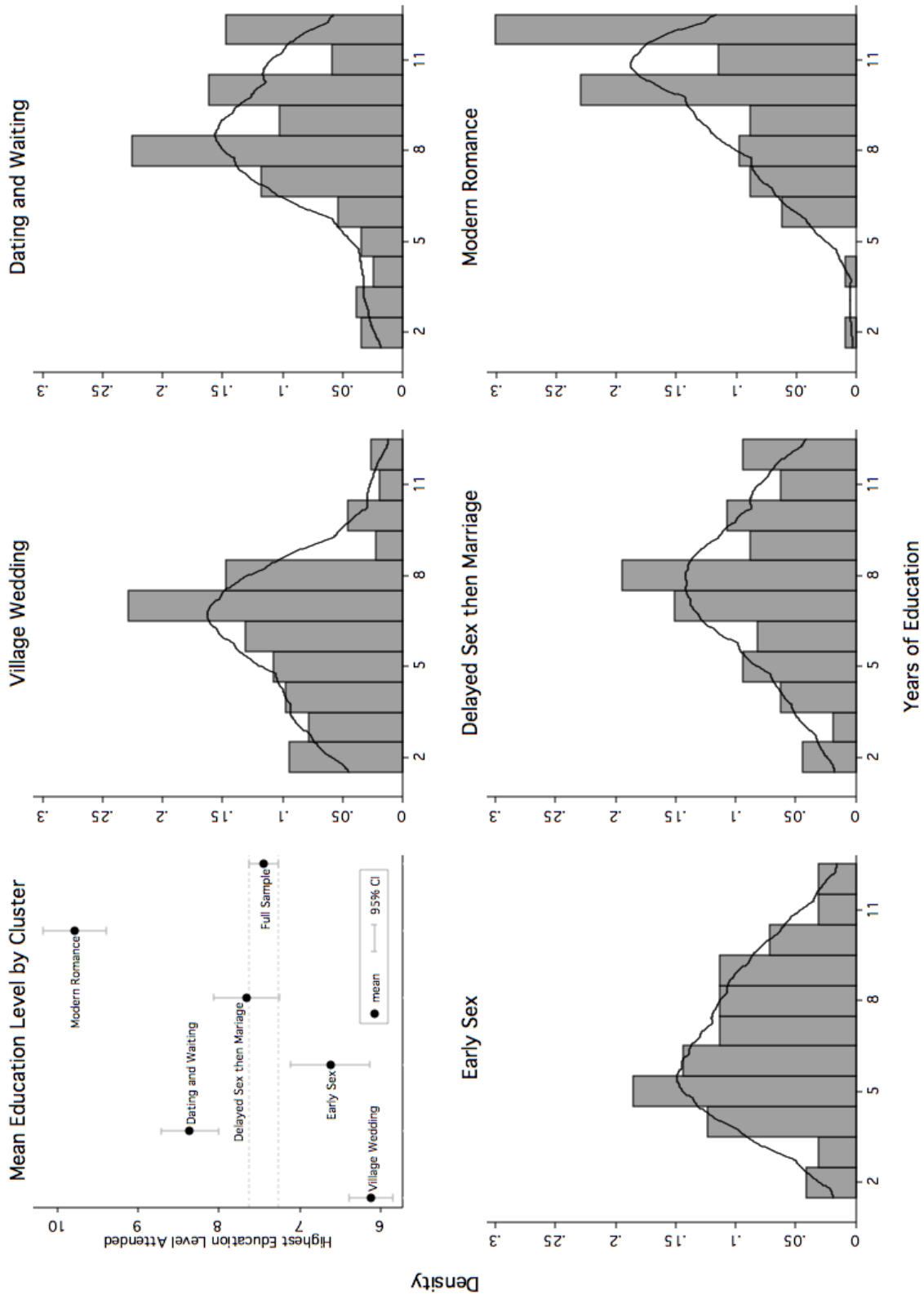
## Relationship Sequences and Education

### *Bivariate Analyses*

The results presented thus far have established that there is substantial variation in how relationships unfold for young women in Malawi. The relationship scripts were grouped into five clusters that share similar sequential patterns using optimal matching and cluster analysis. The results have also shown that two particularly meaningful dimension of variation between the sequences are the sequential position of sexual intercourse within the sequences and whether or not sex occurs before wedding ceremonies. In this section, I will examine whether education— measured here as the highest level of school attended by the respondent— is associated with the three dimensions of variation that I just described: cluster membership, the sequential position of the sex card, and whether or not sex occurs before wedding ceremonies.

I begin with cluster membership. Information about the distribution of years of education for each cluster is presented in Figure 6. The top left panel of this graph shows the mean educational level for each cluster, with the dashed lines representing the confidence intervals around the full sample mean. The other five panels show histograms of years in school for each of the five clusters. The clusters differ substantially in terms of the distribution of schooling experiences. The Village Wedding cluster is the least educated, on average, with a mean of 6.11 years of school. The Early Sex cluster is also comprised of women with relatively low levels of education; this cluster has an average of 6.62 years in school. On the other hand, both Modern Romance and Dating and Waiting are comprised of women who are more educated than the average women in Balaka. The skew in the distribution of years of schooling is particularly striking for the Modern Romance cluster, with an average of 9.79 years of school, higher than 74 percent of the sample, and a mode of 12 years, a level reached by only 9 percent of the sample. For Dating and Waiting, the mean level of education is 8.36 years, which is significantly higher than but not interpretably very different from the sample mean of 7.44. But when we compare the distribution of educational status for this cluster to that of the other “marriage before sex” cluster, Village Wedding, it is clear that the Dating and Waiting group includes more women who have attended secondary school and fewer women who left school at the early primary level. Membership in the Delayed Sex then Marriage cluster appears to be less correlated with educational status; the average education level for this cluster is 7.66, only slightly above the sample mean, and the distribution appears to be relatively symmetrical around the mode of eight years.

Figure 6: Distribution of Educational Attainment by Cluster



Returning to the two key dimensions of variation in the sequences— the sequential position of sexual intercourse and whether or not sexual intercourse is placed before wedding ceremonies, it appears from Figure 6 that education is highly correlated with variation in the number of events that precede sexual intercourse, but less so with the ordering of sex and marriage. The two clusters where sex occurs relatively later in the sequences are comprised of women with higher education, on average, while in the two low-education clusters, sex occurs earlier in the sequences. On the other hand, for the two clusters where sex occurs *after* marriage (Village Wedding and Dating and Waiting) and those where sex occurs *before* marriage (Early Sex, Modern Romance, and Delayed Sex then Marriage), there is no consistent pattern in terms of educational experiences.

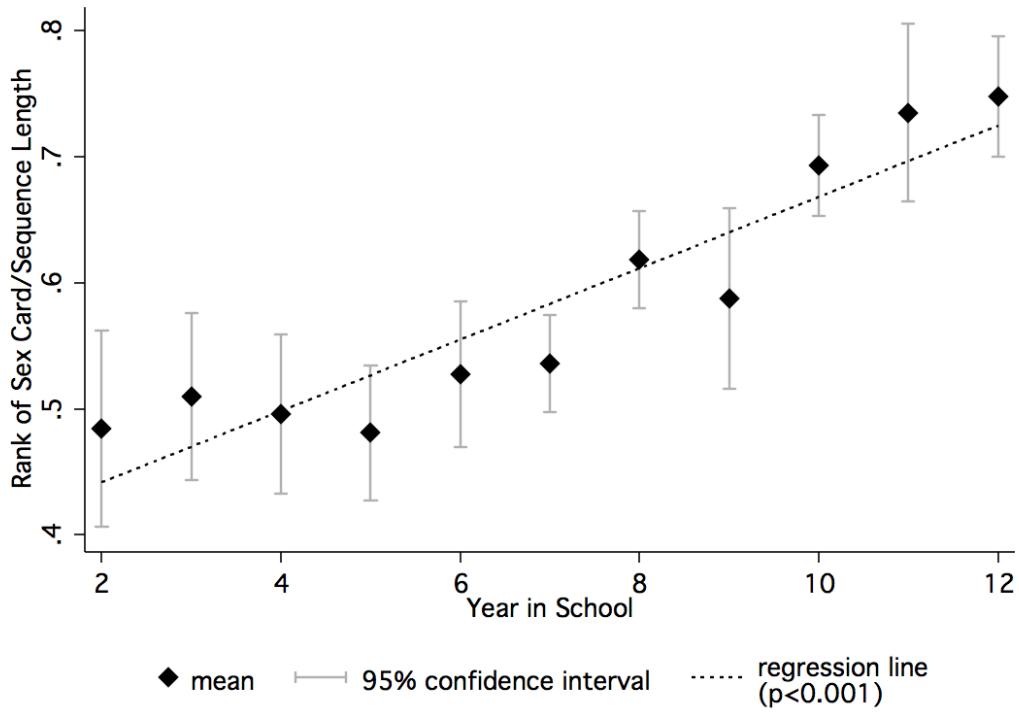
A look at how these two measures vary by educational status confirms these impressions. In Figure 7, I plot the sequential position of the sex card, standardized by the overall length of the sequence, by educational status. Values close to zero indicate that sex was placed at the beginning of the sequence, while values close to one tell us that sex was placed close to the end of the sequence. This graph shows a clear positive trend— more educated respondents place sex later in their sequences than do less educated respondents. While respondents with five years of school or fewer tend to place the sex card around the middle of their sequences, on average, those with eleven or twelve years of school place the sex card around 70 percent of the way through their relationship sequences.<sup>43</sup> The dotted line is a linear regression line fitted to these data; it shows that the correlation between the two variables is highly significant at  $p < 0.001$ .

Figure 8 presents a graph of the proportion of respondents who place the sex card before all three types of wedding ceremonies (religious, civil, and traditional) by years of education. There is little evidence of an association between the ordering of sex and marriage and educational status: while the highest levels of education have slightly higher mean values, almost all confidence intervals cross the 50 percent line and the only statistically significant differences are between women with 12 years of education and those with 7 and 8 years. The regression line also shows that the correlation is weak: the line is relatively flat and the p-value is only marginally significant at 0.08. Indeed, it appears that while education is strongly associated with the number of overall events placed before sex, it is less correlated with whether or not a respondent gets married before having sex with her partner.

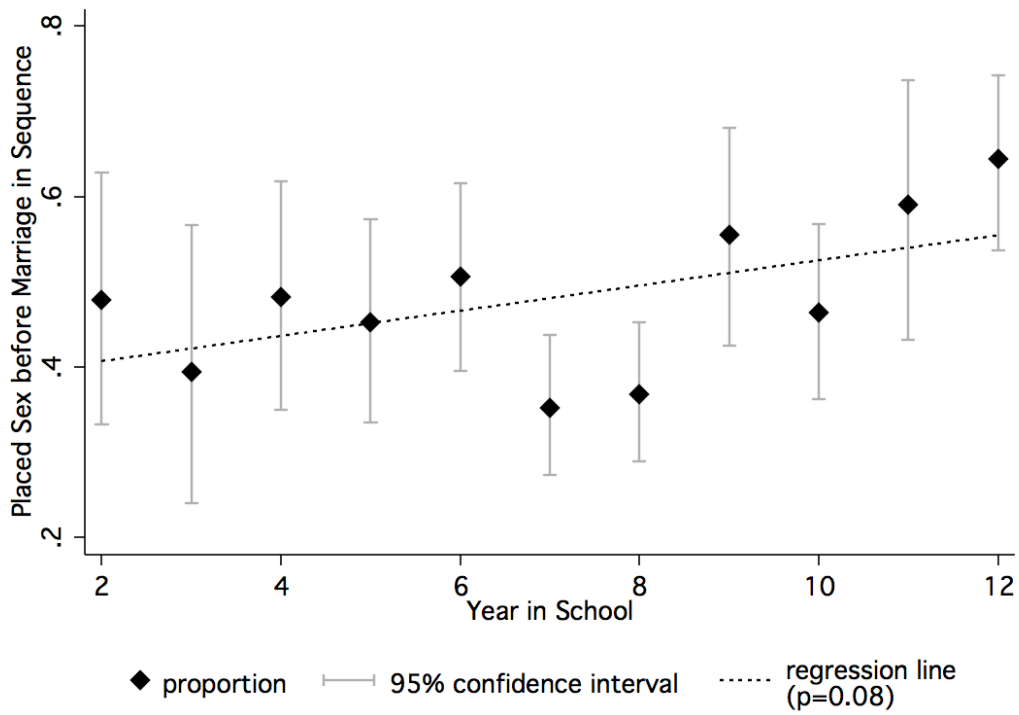
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<sup>43</sup> The same data are analyzed without standardizing the sequential position by the length of the sequence, and the positive trend remains.

**Figure 7: Sequential Position of Sex Card by Highest Year in School Attended**



**Figure 8: Proportion Placing Sex Card Before Any Wedding Card by Highest Year in School Attended**



### *Multivariate Analyses*

To examine whether these patterns remain after controlling for the socio-demographic characteristics, I conducted a series of multivariate analyses. Table 9 presents the results of a multinomial logistic regression model predicting membership in the different clusters. The first row in this table shows that educational attainment is significantly associated with cluster membership, net of socio-demographic controls. Because multinomial logistic regression results can be difficult to interpret, Figure 9 shows a graph of predicted values by years of education, with all binary variables held to the modal response and all continuous variables at their mean (see Table 7). This graph clearly shows that a respondent's likelihood of being assigned to the two clusters in which sex occurs later in the sequences, Dating and Waiting and Modern Romance, rises substantially as years of education increases. On the other hand, the predicted likelihood of being assigned to the Village Wedding and Early Sex clusters declines as education increases. Converting the coefficients in Table 9 to relative risk ratios gives a sense of the magnitude of these differences. Relative to being in the Delayed Sex then Marriage group, an additional year of education increases the risk of being assigned to Modern Romance by a factor 1.27, and that of being assigned to Dating and Waiting by 1.10; the latter result is only marginally significant at  $p=0.07$ . The risk of being assigned to Early Sex relative to Delayed Sex then Marriage decreases by a factor of 0.74 with each year of education, for Village Wedding, the relative risk ratio is 0.79. Respondents who are currently enrolled in school are significantly more likely to be in the Modern Romance cluster than the Delayed Sex then Marriage cluster, with a relative risk ratio of 6.06; current school enrollment is negatively associated with being in the Early Sex cluster, on the other hand, with a relative risk ratio of 12.18.

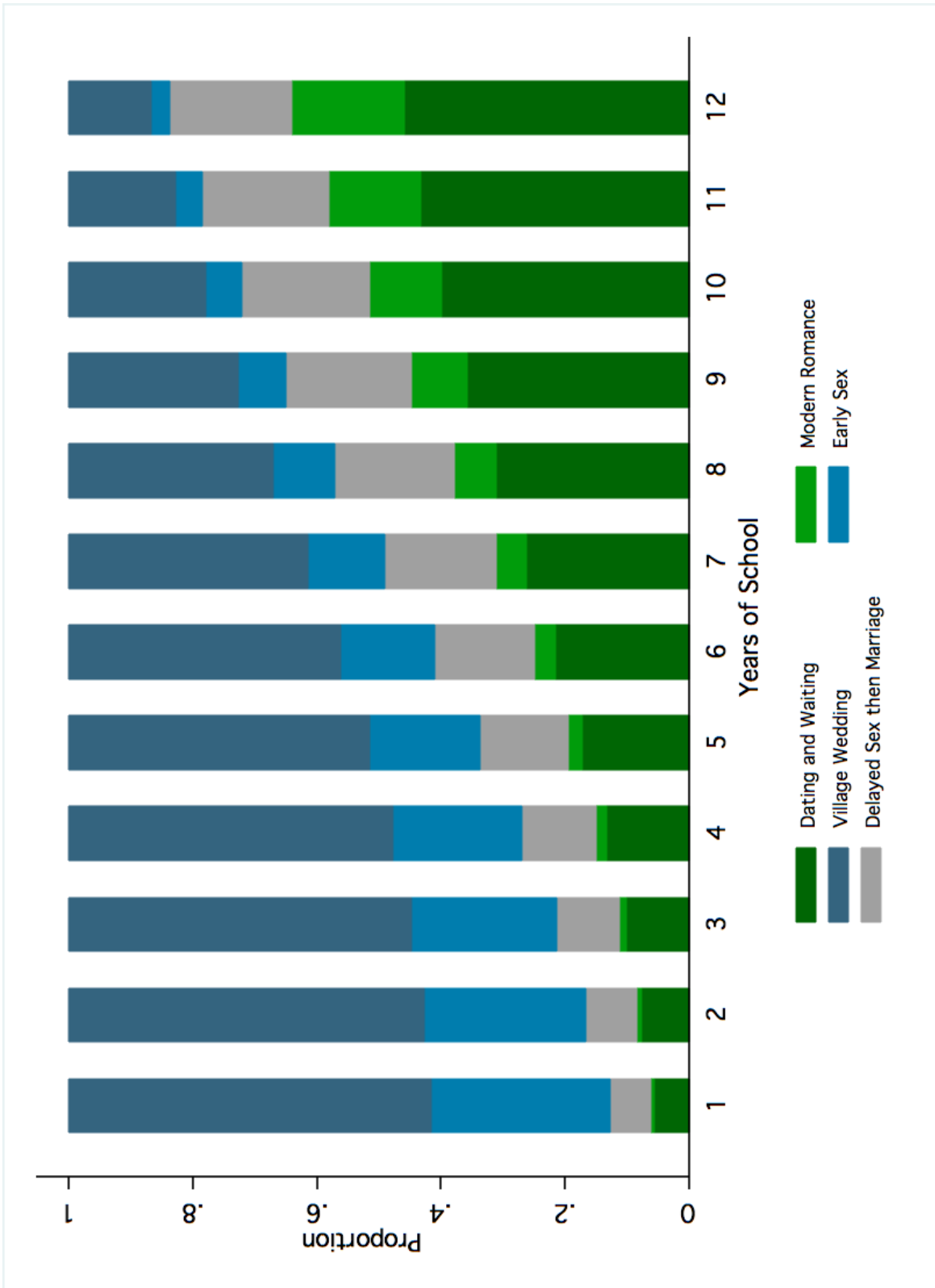
The two education variables are the most powerful predictors of cluster membership in the models: they have the largest (standardized) coefficients and vary significantly between the greatest number of clusters. Nonetheless, several other variables included in the models are found to be significant predictors of cluster membership. Socio-economic status, measured using the household goods index, is marginally positively associated with being assigned to Modern Romance ( $p= 0.06$ ): a standard deviation increase in this measure is associated with a 1.15 factor in the risk of assignment in this cluster, relative to Delayed Sex then Marriage." Older respondents are marginally significantly more likely to be in the Modern Romance cluster, relative to Delayed Sex then Marriage ( $p= 0.07$ ) and more likely to be in the Village Wedding cluster. While religiosity is not a significant predictor of cluster membership, differences do exist between different religious affiliations: relative to Protestants, Catholic respondents are about 0.61 times less likely to be assigned to the Village Wedding versus the Delayed Sex then Marriage cluster, and Muslim respondents face about half the risk likelihood of being assigned to the Early Sex cluster. The measure of rurality, constructed using the distance from respondents' village of residence to the center of town, is not a significant predictor of membership in any of the clusters, relative to Delayed Sex then Marriage."



**Table 9: Results of Multinomial Logistic Regression Predicting Cluster Membership**

VARIABLES	Village Wedding	Dating and Waiting	Early Sex	Modern Romance
Education				
Years of Education	-0.233*** (0.048)	0.093+ (0.052)	-0.303*** (0.063)	0.242** (0.074)
Currently In School	0.260 (0.741)	-0.327 (0.740)	2.500*** (0.628)	1.803** (0.581)
Socio-demographic Controls				
SES	-0.038 (0.062)	-0.041 (0.063)	0.053 (0.078)	0.136+ -0.071
Age	0.076+ (0.044)	0.063 (0.047)	-0.086 (0.057)	-0.103+ (0.058)
Distance from Town Center	0.086 (0.118)	0.070 (0.129)	0.007 (0.157)	0.105 (0.159)
Religion				
Attends Religious Services at Least Weekly	-0.074 (0.211)	0.216 (0.231)	-0.189 (0.278)	-0.211 (0.286)
Religious Affiliation				
Protestant	---	---	---	---
Catholic	-0.493* (0.242)	-0.313 (0.249)	-0.338 (0.308)	0.021 (0.307)
Muslim	-0.055 (0.258)	-0.434 (0.293)	-0.765* (0.368)	-0.616 (0.411)
Relationship History				
Age at First Sex	0.090+ (0.048)	0.141** (0.050)	0.033 (0.066)	0.098 (0.067)
Relationship Duration	0.008 (0.039)	0.033 (0.042)	-0.092+ (0.056)	-0.240*** (0.067)
Constant	-0.666 (1.080)	-4.243*** (1.145)	3.556* (1.423)	-1.052 (1.360)
Observations	877	877	877	877
BIC	2526.124	2526.124	2526.124	2526.124

Figure 9: Predicted Probability by Highest Education Level Attended, Multinomial Regression Predicting Cluster Membership



Turning to the relationship history measures, age at first sex appears to be a particularly significant characteristic differentiating between the Dating and Waiting and Delayed Sex then Marriage clusters, with a one-year delay in sexual debut corresponding to a 1.15 factor increase in being assigned to the Dating and Waiting cluster. This variable is also marginally significant predictor of being assigned to Village Wedding ( $p=0.06$ ), with a relative risk ratio of 1.09 for each additional year of age at first sex. Relationship duration is significantly negatively associated with being assigned to Modern Romance; an additional year of relationship duration is associated with a .79 factor decrease in the risk of being in this group relative to Delayed Sex then Marriage.”

Table 10 presents the results of ordinary least squares regression models predicting the sequential position of sexual intercourse within the relationship sequences, or the number of cards that were placed before the sex card when describing respondents’ past relationship experiences, controlling for differences in the overall length of the sequence. The first column shows the model with the education, socio-demographic, and relationship history covariates included. As the first line shows, years of education is highly significantly associated with the sequential position of sex— with each additional year of school that a respondent has attended, a respondent places about 0.27 more cards before sex, on average. The only other covariate in Model 1 that is significantly associated with the outcome is age: holding all other variables constant, the oldest respondents (aged 26) place 1.12 more cards before sex, on average, than the youngest respondents (aged 16).

I examine whether education is significantly associated with whether or not sex occurs before marriage using logistic regression, presented in Table 11. Consistent with the results from the bivariate analyses in Figure 8, this table shows that education level, measured as the highest year in school a respondent reports having attended, is only weakly associated with the ordering of sex and marriage: a one-year increase in education increases the odds of placing sex before marriage by a factor of 1.06 ( $p=0.08$ ). On the other hand, socio-economic status is a highly significant predictor for this relationship sequence measure: a standard deviation increase in the household goods index is associated with a 1.16 factor increase in the odds of a respondent placing sex before all three wedding cards. Older respondents are also much less likely to place the sex card before marriage cards: specifically, each additional year of age is associated with a 0.87 factor decrease in the odds of placing the cards in this order. And finally, respondents who live further from the town center are marginally significantly more likely to place sex before marriage ( $p= 0.08$ ), offering further evidence of a positive association between this measure and socio-economic status.

**Table 10: Results of OLS Regression Models Predicting Sequential Position of Sex within Sequences**

VARIABLES	(1)	(2)	(3)	(4)
Education				
Years of Education	0.277*** (0.056)	0.206** (0.072)	0.239*** (0.057)	0.157* (0.063)
Currently In School	0.047 (0.558)	0.276 (0.585)	-0.021 (0.555)	0.137 (0.553)
Socio-demographic Controls				
Socio-Economic Status	0.087 (0.073)	0.088 (0.077)	0.080 (0.072)	0.001 (0.075)
Age	0.112* (0.054)	0.131* (0.057)	0.112* (0.054)	0.107* (0.054)
Distance from Town Center	-0.125 (0.144)	-0.107 (0.149)	-0.085 (0.144)	-0.092 (0.143)
Religion				
Attends Religious Services at Least Weekly	0.348 (0.261)	0.303 (0.272)	0.308 (0.262)	0.178 (0.262)
Religious Affiliation				
Protestant	Ref.	Ref.	Ref.	Ref.
Catholic	-0.060 (0.292)	-0.091 (0.304)	-0.046 (0.291)	-0.055 (0.289)
Muslim	-0.300 (0.329)	-0.139 (0.342)	-0.260 (0.328)	-0.359 (0.327)
Relationship History Variables				
Age at First Sex	0.041 (0.058)	0.029 (0.061)	0.046 (0.058)	0.049 (0.058)
Relationship Duration	-0.036 (0.051)	-0.043 (0.054)	-0.030 (0.051)	-0.041 (0.051)
Married	0.403 (0.360)	0.365 (0.376)	0.445 (0.360)	0.742* (0.374)

Notes: Standard errors in parentheses. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.100.

**Table 10 (Continued)**

Cognitive Skills Measures				
Literacy				
	Low		Ref.	
	Medium		0.378 (0.379)	
	High		0.682 (0.710)	
Numeracy				
	Low		Ref.	
	Medium		0.085 (0.328)	
	High		0.481 (0.406)	
Ideal Sequence Variables				
	Sequential Order of Sex Card		0.071+ (0.042)	
	2+ Friend and Community Events Before Sex		0.034 (0.165)	
	Average Sequential Order of HIV Testing Card		-0.037 (0.028)	
	Pregnancy Included in Sequence		-0.676* (0.291)	
Position in Sexual Field				
	Average Attractiveness Score		0.854* (0.350)	
	Hair Professionally Styled		0.630* (0.280)	
	Partner Finished Secondary School		0.742* (0.299)	
	Egalitarian Relationship Before Sex		0.677* (0.295)	
Relationship Sequence Length	0.388*** (0.049)	0.401*** (0.051)	0.385*** (0.050)	0.372*** (0.049)
Constant	-2.251 (1.433)	-2.519+ (1.506)	-2.421+ (1.448)	-4.163** (1.594)
Observations	877	877	877	877
R-squared	0.167	0.170	0.181	0.191
BIC	4753.470	4477.289	4766.425	4733.937

**Table 11: Results of Logistic Regression Model Predicting Placing Sex Card Before Marriage**

VARIABLES	(1)
Years of Education	0.060+ (0.033)
Socio-Economic Status	0.145** (0.044)
Age	-0.139*** (0.032)
Attends Religious Services at Least Weekly	-0.256 (0.157)
Religious Affiliation	---
Protestant	
Catholic	0.113 (0.176)
Muslim	0.022 (0.198)
Distance from Town Center	0.154+ (0.088)
Relationship History	
Age at First Sex	-0.033 (0.035)
Relationship Duration	-0.000 (0.000)
Constant	5.916*** (0.888)
Observations	877
BIC	1107.958

Notes: Standard errors in parentheses. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.100$ .  
Because no respondents who are currently in school are married, this model does not the variable indicating in-school respondents.

Together, the bivariate and multivariate analyses provide strong support for the hypothesis that variation in how relationships unfold is correlated with differences in educational experiences. The clusters of sequences were generated based on the relationship scripts themselves, with no other information about respondents included in the models. Figure 6 shows that these groupings of relationship sequences correspond to differences in the highest level of school that respondents attended. Table 9 reveals that years of schooling and whether or not a respondent is in school are the most significant predictors of cluster assignment out of all of the covariates examined in the model, including several background characteristics and measures related to the respondents' relationship history.

The analyses focusing on cluster membership also show that education is more strongly associated with the sequential position of sex than whether or not sex occurs before marriage:

the two clusters that are most prevalent among more educated women are both characterized by a higher number of cards placed before sex, but they differ in terms of whether or not sex occurs before marriage. As Figure 7 and Table 10 show, the highest level of school that respondents attended is also significantly associated with where in the sequence sex occurs, with more educated respondents placing more events before the sex card, on average, than less educated respondents. Education—measured in terms of the highest year attended and whether or not a respondent is currently in school—is only a weak predictor of the other key dimension of variation in the relationship sequences, whether or not sex occurs before wedding ceremonies (Figure 8, Table 11).

### **Three Hypothesized Mechanisms**

I now turn to the three mechanisms that I introduced at the beginning of this paper—differences in cognitive skills, relationship ideals, and positions in the sexual social field—to determine the extent to which they mediate the association between educational experiences and relationship sequences. As described above, I use the four criteria commonly recognized as identifying mediators, the first of which is that the independent variable (in my case, educational status) must be a significant predictor of the outcome of interest in the absence of the mediators. This criterion is met for the models predicting the position of sex within the sequences, but not for the other dimension of variation between relationship sequences: the relative order of sex and marriage. For this reason, I focus on the number of cards placed before sex when examining the three hypothesized mechanisms.

The second criterion for mediation is that the independent variable (educational status) must be a significant predictor of the mediator variable. Table 12 presents a series of bivariate analyses examining how the mediator variables correlate with educational status. The top panel shows the literacy and numeracy variables. As expected, respondents who are more educated have significantly higher literacy and numeracy scores, on average, though these relationships are far from clean. More than 15% of respondents who report having finished at least one year of secondary school were rated as reading at below the level of an average primary school student. And for numeracy, 21% of those in the highest education category were rated as having low numeracy skills.

The middle panel shows the variables representing relationship ideals. I tested the same set of 29 variables that were used in Table 8 to display differences between the clusters of realized sequences, only this time I used the ideal sequences for each respondent. For each variable, I compared the mean for each education level, and include in the table all variables for which at least one education level was significantly different from the other two, using one-tailed t-tests. For each measure for which significant differences were detected, respondents who attended secondary school were the outliers. Only seven out of twenty nine variables showed significant differences across levels of educational attainment and are thus included in the table. This speaks to the fact that in general, the relationship sequences describing ideals were much less heterogeneous than were those describing real experiences.

**Table 12: Bivariate Associations between Mediator Variables and Education Level**

MEDIATOR VARIABLE	Highest Education Level Attended			Position of Sex Card <sup>1</sup>
	0-5 Years	6-8 Years	9-12 Years	
<b>COGNITIVE SKILLS</b>				
Literacy				
Low	71.77% ***	16.23%	16.61%	Ref.
Medium	19.62% *	64.35% ***	19.32%	0.029
High	8.81% *	19.32%	64.07% ***	0.134 ***
Col. Total	100%	100	100	
Numeracy				
Low	57.60%**	32.88%**	21.45%	Ref.
Medium	33.64%**	48.37%**	45.02% *	0.046 *
High	8.76%***	18.75%**	33.53%	0.111 ***
Col. Total	100%	100%	100%	
<b>RELATIONSHIP IDEALS</b>				
Average Rank of Sex Card	0.793	0.837	0.932 ***	0.256 ***
Friend and Community Events				
Rank of cards	7.918	8.266	6.830 *	-0.001
2+ cards before sex	1.302	1.316	1.544 *	0.042 *
Exchanging Gifts				
Rank of cards	8.604	8.336	6.974 **	-0.006
Family Formation Decisions				
# of cards in sequence	1.535	1.505	1.344 *	-0.044 <sup>2</sup>
Sexual and Reproductive Health				
Rank of HIV testing	6.251	4.973	3.295 ***	-0.004 *
Pregnancy				
Include card in sequence	45.63%	41.82%	25.12% ***	-0.063 ***
<b>SEXUAL FIELD</b>				
Attractiveness Score	2.173*	2.368 *	2.737 *	0.142 ***
Chemically Treated Hair	23.00%	30.71%	51.42% *	0.072 ***
Partner Completed				
Secondary School	23.01%*	43.95%*	85.72% *	0.107 ***
Egalitarian Relationship	18.12%*	26.44%	29.31%	0.046 *

<sup>1</sup> Regression coefficients for model predicting sequential position of sex in realized sequences, controlling for years of education, sequence length, and the mediator in each row.

<sup>2</sup> This measure has three values: 0, 1, and 2. The reported coefficient for 2 events in sequence, relative to 0. The coefficient for 1 event was also not statistically significant.



Figures 10, 11, and 12 show sequence index plots for the same random sample of respondents displayed in Figures 3-5, only this time, their ideal sequences are displayed. Comparing these two sets of figures, it is clear that while some differences remain, the ideal sequences are on average much more similar across clusters than the realized sequences. These results show that while experiences differ widely by educational status, relationship ideals are broadly shared in this population.

The bottom panel of Table 12 presents the bivariate comparisons for the variables measuring respondents' position in the sexual social field: the two variables capturing respondents' perceived desirability or attractiveness (the average score of interviewer-rated attractiveness across survey waves and whether or not the respondent had her hair chemically treated) and the two measures of partner characteristics (whether the respondent reports an egalitarian relationship and whether the partner finished secondary school). Significant differences across education levels were found for each of the four variables.

The third criterion for mediation states that the mediator variable must be a significant and independent predictor of the outcome variable; in other words, it must be significantly associated with the sequential position of sex, controlling for educational status. I test this criterion through a set of regressions predicting the sequential position of sexual intercourse in the sequence, controlling for sequence length, years of education, and the mediator being tested. The results are presented in the fourth column of Table 12. The top panel shows that as literacy and numeracy increase, sex is placed later in the sequences, on average, though only the high scores are significantly different from the other two categories for each measure. In the middle panel, we see again the results for the measures of ideal sequence variables. Only four variables remain as potential mediators at this stage: the average rank or sequential position of the sex card in the ideal sequences, whether or not a respondent placed two friend and community events before sex, the average rank or sequential position of HIV testing in ideal sequences, and whether pregnancy is included in the sequences. The results for variables testing the third mechanism, position in the sexual social field, are presented in the bottom panel. All are found to be significant and independent predictors of the outcome variable.

Figure 10: Sequence Index Plot Showing Sex and Marriage, Ideal Relationship Sequences

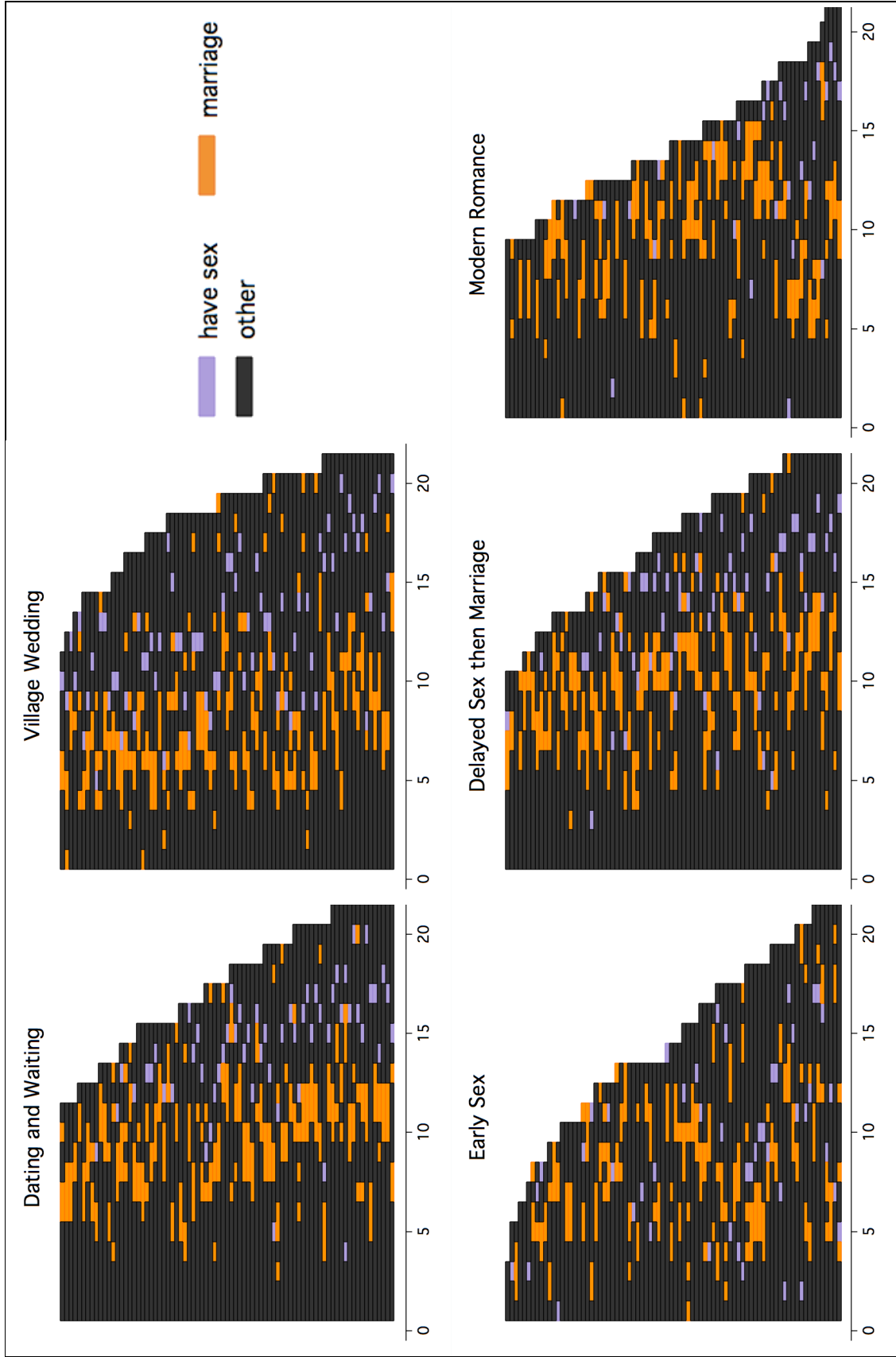


Figure 11: Sequence Index Plot Showing Sex, Marriage, and Meeting Parents, Ideal Relationship Sequences

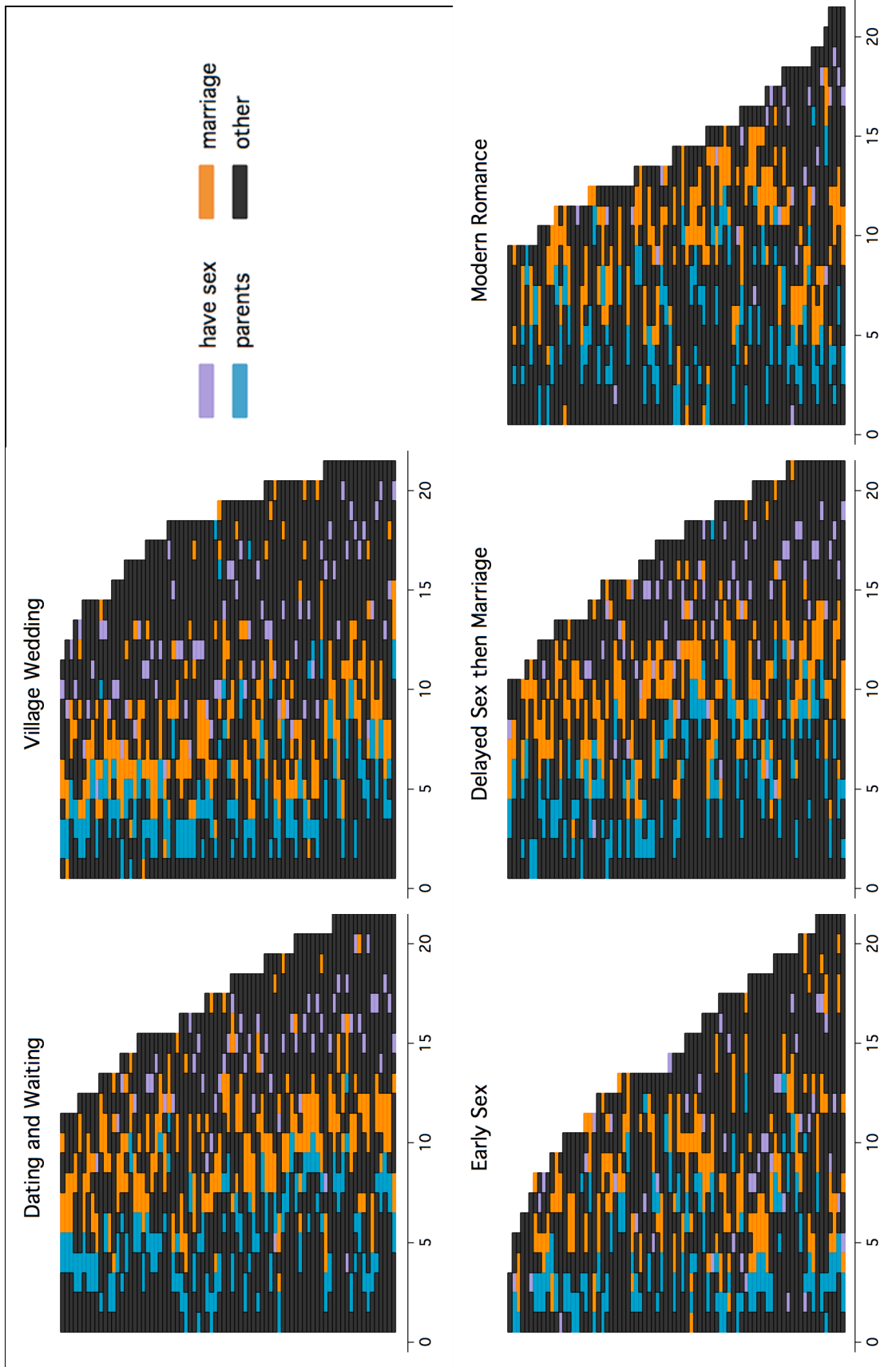
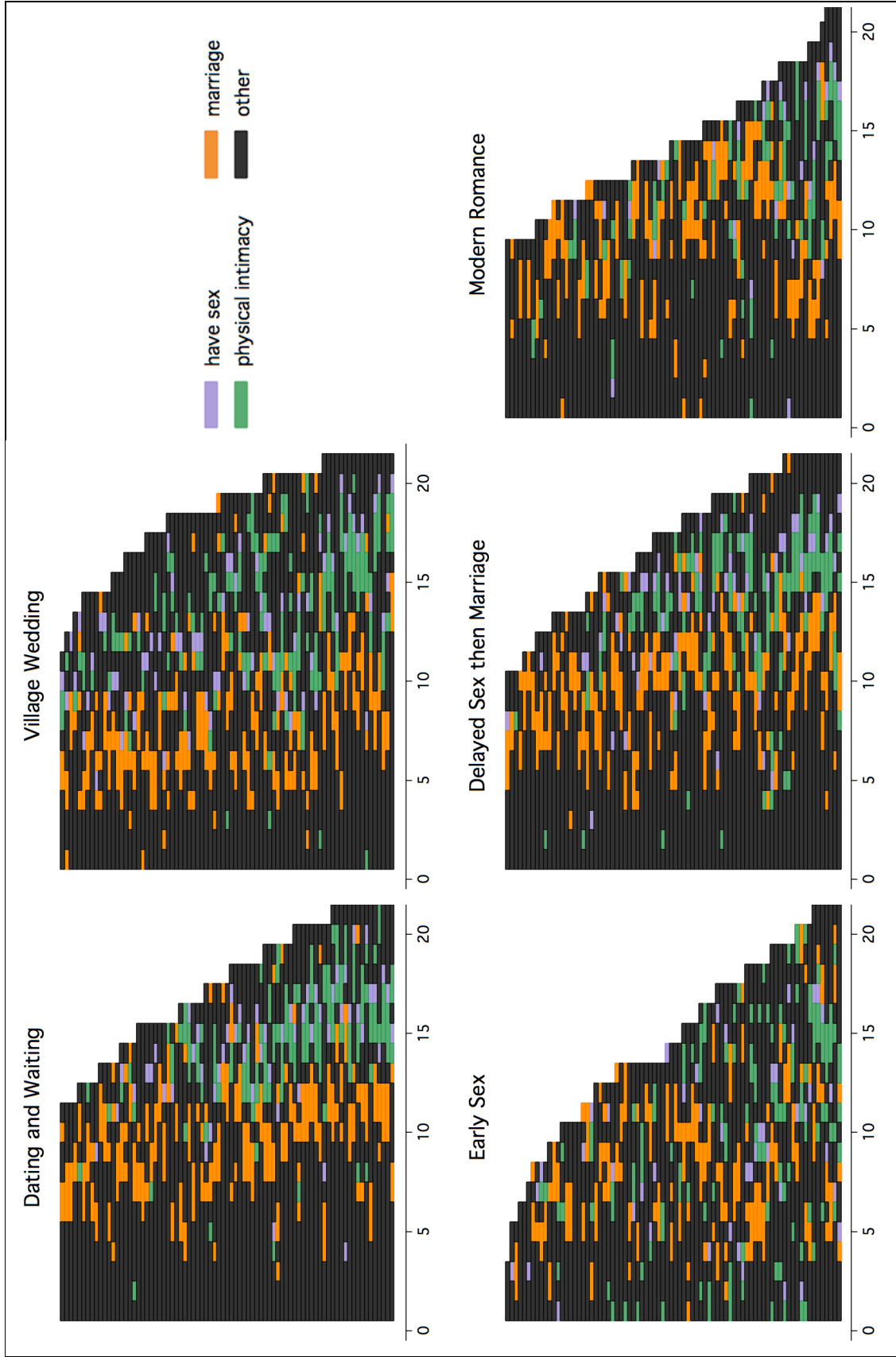


Figure 12: Sequence Index Plot of Sex, Marriage, and Physical Intimacy: 5 Cluster Solution, Ideal Relationship Sequences



The fourth criterion for mediation states that controlling for the mediator reduces the effect of the independent variable on the dependent variable. For each potential mediator that satisfies the first three criteria, the results of the Sobel-Goodman mediation test are presented in Table 13. The only mechanism for which significant indirect effects were detected is position in the sexual social field. Three out of the four measures used to represent this mechanism were found to be significant mediators: the measure of interviewer-rated attractiveness explains about a quarter of the effect of years of education on the sequential position of sexual intercourse in the sequences, the indicator for chemically treated hair explains about eight percent of the total effect of years of education, and having a partner who finished secondary school explains about twenty percent. Besides these social positioning variables, only one variable was marginally significant as a mediator: about six percent of the effect of years of education was found to operate through placing the pregnancy card in the ideal sequence.

In the second, third, and fourth columns of Table 10, I show the results of regression models predicting the position of the sex card in respondents realized sequences, with all mediators that met the first three criteria. These models confirm the results of the Sobel-Goodman test: only the social positioning variable, included in Model 4, are significant predictors of the outcome, and the coefficient for years of education is most substantially reduced in this model. When we look at the Bayesian Information Criteria in the final row of the table, only these variables improve the fit of the model.

Together, these results provide substantial support for the third hypothesized mechanism: that more and less educated women report different sexual relationship sequences because of their unique positions in the sexual social field, in terms of where they fall along the tiers of desirability in Balaka and in terms of the characteristics of their partners. On the other hand, I find weak support for the other two hypothesized mechanisms. Neither of the measures used to represent cognitive skills (literacy and numeracy scores) were found to be significant mediators (Table 13) or to significantly predict the outcome when all covariates are included (Table 10). Out of 29 variables that I tested to examine differences in relationship ideals, only one— placing the pregnancy card anywhere in the ideal sequence—was found to significantly predict the outcome with all covariates included, and to be a marginally significant mediator using the Sobel-Goodman test.

**Table 13: Indirect and Direct Effects for Each Potential Mediator**

Mediator Being Tested	Indirect Effect (SE)	Direct Effect (SE)	Proportion of Total Effect Mediated
<b>COGNITIVE SKILLS</b>			
Literacy (High Level)	0.016 (0.016)	0.222*** (0.066)	0.067
Numeracy (High Level)	0.012 (0.010)	0.222*** (0.064)	0.051
<b>RELATIONSHIP IDEALS</b>			
Ideal Rank	0.009 (0.006)	0.268*** (0.056)	0.034
Friends Before Sex	0.006 (0.005)	0.272*** (0.058)	0.020
HIV Rank Ideal	0.015 (0.009)	0.263*** (0.059)	0.053
<i>Pregnant in Sequence</i>	<i>0.014+</i> <i>(0.008)</i>	<i>0.263***</i> <i>(0.058)</i>	<i>0.056</i>
<b>SEXUAL FIELD</b>			
<b>Attract Score</b>	<b>0.067**</b> <b>(0.026)</b>	<b>0.210***</b> <b>(0.062)</b>	<b>0.242</b>
<b>Treated Hair</b>	<b>0.020*</b> <b>(0.010)</b>	<b>0.257***</b> <b>(0.060)</b>	<b>0.079</b>
<b>Partner Sec</b>	<b>0.056**</b> <b>(0.022)</b>	<b>0.222***</b> <b>(0.058)</b>	<b>0.201</b>
Egalitarian Relationship	0.006 (0.005)	0.284 (0.058)	0.023

Notes: This table uses Sobel-Goodman tests of mediation to test the indirect effect of education on sequential position of sex through each mediator. Variables in bold were found to be significant mediators, those in italics are significant at the 90% level of confidence. Standard errors are estimated through bootstrap resampling, with 1,000 replications.

## DISCUSSION AND CONCLUSION

This study investigated how schooling experiences structure romantic relationships in Malawi. I found that differences in educational attainment are strongly associated with variation in the sequences of events in young women's relationships in this context. When the relationship sequences were grouped into similar clusters using the data reduction techniques of optimal matching and hierarchical clustering, educational attainment was a highly significant predictor of which cluster an individual was assigned. In particular, educational attainment was found to be strongly associated with the sequential position of sexual intercourse, with more educated respondents experiencing more events with their partners before having sex. On the other hand, I found evidence of only a weak association between educational attainment and the relative ordering of sex and marriage.

The fact that education was not found to be a significant predictor of the ordering of sex and marriage is not surprising, when we consider that whether sex occurs before or after marriage is the product of two separate demographic processes, which are correlated in different directions with educational attainment. Mensch, Grant, and Blanc (2006) use DHS data from 27 African countries and population decomposition techniques to adjudicate between two processes that might explain the overall trend of increasing prevalence of premarital sex across the region: an increase in the *period of exposure* to premarital sex resulting from declines in child marriages and an increase in the *rate of initiation* of premarital sex. They find mixed results— in some countries the rate of initiation appears to be the stronger contributor to the increase in premarital sex, while the lengthening exposure period explains most of the effect in other countries. Malawi was among the countries for which the increase in premarital sex was found to be attributable to both processes. Educational attainment is positively associated with an increase in the period of exposure to premarital sex; scholars have consistently found that educated youth marry at older ages (e.g.: Baird et al. 2010; Blanc and Way 1998; Lloyd 2005). But educational attainment is negatively associated with the rate of initiation of premarital sex— young adults with higher levels of education wait longer to have sex for the first time and are proportionally less likely to be sexually active (Hargreaves et al. 2008; Kaufman et al. 2004; McGrath et al. 2009).

In addition to these two demographic processes, multiple cultural dynamics are at play as well in the order of sex and marriage. In sub-Saharan Africa, marriage is not a discrete event but a heterogeneous process that sometimes spans multiple years and includes a variety of ceremonies, and other times rests on a verbal agreement without any formal ceremony at all (Bledsoe and Pison 1994; Hattori and Dodoo 2007; Meekers 1992). More educated youth are likely expected to have more elaborate and expensive wedding ceremonies, further delaying marriage. Young people are exposed through formal schooling to a vast amount of rhetoric emphasizing premarital abstinence in HIV prevention campaigns and sexual education programs, many of which target students as their primary audience (Kirby 2008; Mantell et al. 2006; Muula 2006). But more educated youth are also more likely to come into contact with

cultural models of Western-style dating and romantic love, which may weaken the taboos surrounding premarital sex (Harrison 2008; Smith 2000; Spronk 2012). In other words, premarital sex may mean something very different depending on where a person is located in the social field.

Research on adolescent sexuality typically assumes that marriage is a less risky context for sexual activity; the reigning methodological strategy is to remove married individuals from a sample in order to empirically examine the consequences of adolescent sexual activity (e.g., Cleland and Ali 2006; Kabiru and Ezeh 2007; Miller et al. 2008; Trinitapoli 2009). But marital status is a flawed benchmark for distinguishing between safe and risky sexual experiences. In fact, recent evidence suggests that married young women may be more at risk for contracting AIDS than their unmarried counterparts: they are more likely to be sexually involved with men who are considerably older than they, and unlikely to use condoms (Clark, Bruce, and Dude 2006; Clark 2004). In Southern Malawi, the high rate of divorce among young married couples, dating back to at least the early 1950s, adds to the multitude of factors that make marriage a poor indicator of safety (Kaler 2001).

From a public health standpoint, sex that occurs before individuals develop trust, intimacy, and comfort with their partner is more of a concern than sex that occurs within or outside of marriage. The sequential position of sexual intercourse is thus likely a more informative indicator of the safety versus risk of sexual encounters in this context than premarital sex. All of the cards included in the sequences were found in the pilot study to be meaningful milestones among Malawian young adults. We can expect that couples that have made it through more of these events before having sex are more likely to feel closeness and affinity towards each other, and may be more likely to have sex under conditions that are safe and mutually beneficial. The sequential position of sex in the sequences is highly correlated with educational attainment, and years of schooling are a better predictor of this outcome than any of the other socio-demographic or relationship variables included in the analysis. This finding suggests that exposure to formal schooling does indeed influence sexual relationships, confirming the first hypothesis of this study.

The finding that educational attainment is a strong predictor of the sequential position of sex but is not significantly associated with the relative ordering of sex and marriage also has methodological implications. If I were analyzing data from a more conventional demographic survey, I would be limited to information on the “landmark” events including sexual intercourse, marriage, pregnancies, and relationship dissolution. Using such coarse data, the associations between education and relationship sequences would likely be obscured, despite the clear evidence that these two life domains are indeed linked in this context. Using detailed sequence data, I am able to examine where first sex occurs relative to a variety of meaningful relationship events, allowing me to uncover causal pathways that would otherwise remain hidden from view.



This study also adjudicates between three competing theories about the causal mechanisms linking sexual experiences with formal schooling. I find that rather than shaping sexual behavior through the accrual of human capital or through instilling different ideals, education seems to situate young women differentially in a sexual social field, allowing them to be perceived as more attractive and to have access to more desirable sexual partners. While I find no evidence that cognitive skills, as represented by literacy and numeracy scores, mediate the relationship between educational attainment and relationship sequence patterns, this finding should not be interpreted to mean that cognitive skills do not matter for how individuals make decisions about sexual relationships. Indeed, evidence has shown that such measures are consistent predictors of measures pertaining to the sex act itself— specifically, whether or not a condom was used and whether the couple discussed HIV before having sex. Adherence to these recommendations of HIV prevention programs is more likely to be shaped by individuals' critical thinking and decision-making skills (Baker et al. 2010; Peters et al. 2010). In this study, I take a different perspective on sexual experiences: rather than examining the conditions surrounding the sex act itself, I focus on how sexual intercourse is embedded in the context of the relationship as a whole. From this more long-term, sequential perspective, these cognitive skills do not appear to be a major determinant of variation in sexual experiences among Malawian women.

Given the strong emphasis that schools and teachers place on encouraging sexual discipline and exposing students to postpone sexual debuts and to aspire to companionate and egalitarian marriages, it is somewhat surprising that relationship ideals do not mediate the association between educational attainment and relationship patterns. In unpacking this finding, it seems prudent to begin with a reflection on what the ideal sequences are capturing about how young women in Malawi think about relationship sequences. As a reminder, respondents were asked to imagine they are giving advice to a close friend or relative about how a relationship that has not yet begun would unfold under ideal conditions. These ideal sequences should not be interpreted as *aspirations*, personal ideal trajectories from the perspective of people's current vantage points. Instead, they reflect individuals' ideas about how a relationship should unfold in a general sense. This question was designed to tap into respondents' understandings of the most salient standards and schemas around sexuality rather than their desires or wishes in reference to their own experience.

As the sequence index plots (Figures 3-5 for realized sequences and figures 9-12 for ideal sequences) make clear, respondents who described divergent relationship experiences generally reported ideals that were more similar to each other. These results show that while experiences differ widely by educational status, relationship ideals are broadly shared in this population. The ideal sequences across the five clusters seem most similar to the relationship experiences described by women in the Dating and Waiting cluster, women who are among the most educated in the sample. From a cultural diffusion perspective, it seems that the schemas of delayed sex and dating before marriage spread more widely than the capacities to execute these idealized patterns (Guglielmino et al. 1995).

In his analysis of how expanded access to secondary education shaped the marriage patterns of young people in rural France, Bourdieu describes how peasant families historically operated under a separate cultural system of marriage and were isolated from the urban norms and customs surrounding marriage. But over the 1960s and 1970s, with wider access to educational opportunities came a unification of the symbolic system of marriage. Men and women from rural areas began to judge potential suitors according to the standards and norms of the urban cultural system, despite not having access to the economic resources required to carry out these norms and standards (Bourdieu 2008). In the Malawian case, less educated women seem to aspire to the relationship patterns promoted through schools and media campaigns and experienced by the more educated and cosmopolitan women in Balaka, despite the fact that their realized experiences so often deviate from these shared ideals.

The four measures used in this study to examine social positioning are all imperfect proxies, and no single variable or set of survey responses could capture this theoretical construct. Yet taken together, they tell a compelling story: individuals' perceived attractiveness and the desirability of their partners mediate the association between educational attainment and relationship sequences. The strength of this result in comparison to the other two mechanisms examined here suggests that educational institutions structure relationships through shaping the practices, postures, and dispositions of students rather than through instilling skills or sets of ideas. In other words, the relationship between educational attainment and sexual behavior is less about being educated and more about being "schooled," and is indicated not by exam scores but instead by comportment and self-fashioning.

These findings resonate with Bourdieu's fundamental thesis, that culture and institutions influence social action through the habituation of everyday practices. Indeed, in its elucidation of structures of inequality that are constituted through mutually recognized sets of skills and resources, Bourdieu's triumvirate of *habitus*, *capital*, and *social fields* is a useful framework for thinking about how schools might influence relationships through social positioning. Yet when we turn to his writing about romantic attraction and education, Bourdieu takes us even further towards understanding how these processes come together to shape romantic relationship trajectories. In particular, Bourdieu offers cogent depictions of how schools stratify the sexual social field and how people's perceptions of the attractiveness of others are linked to their relative social positioning.

In *The State Nobility* (1998), Bourdieu describes how sexual stratification is produced by elite educational institutions, which inscribe in individuals who pass through them specific habits and bodily schemas that years later, during routine social interactions, engender feelings of attraction and repulsion that are consonant with the social positions that the two individuals occupy. In this way, schools are "one of the hidden mediations" through which social homogamy—the phenomenon of like marrying like—is achieved (1998:183). Bourdieu writes:

Better than any debutante party, ball, or other institution aimed at circumscribing the area of approved encounters, the algorithm of academic classification, through the groups of homogeneous classmates that it produces, fosters togetherness among like-minded people and, above all, tends to exclude the 'undesirable company' that always carries with it the threat of unsuitable marriages." (1998:182–183).

Teachers, many of whom were themselves educated in similar institutions, work to instill a distinctive set of “bodily *hexis*, clothing, ways of speaking, and even sexual habits” (1998:180) that will make students immediately identifiable as having passed through their schools. In turn, when graduates meet others who have been through this process of inculcation, they feel a sense of “enchantment” towards those who look and act as they do, a phenomenon that he calls “loving oneself in others (1998:183). In comparison with French or American schools, African schools today are particularly attentive towards these non-academic elements of instruction, instilling strict discipline and cultivating civilized individuals through moral instruction and routinized exercises (Coe 2005; Johnson-Hanks 2006, see also chapter 2 of this dissertation). As such, Bourdieu’s theory that schools stratify social fields—including the dynamics of sexual attraction—through these non-academic elements of their teachings is especially germane to this setting.

In *Masculine Domination*, Bourdieu offers a description of how our perceptions of others’ physical attractiveness are socially mediated. We perceive people’s bodies through what Bourdieu describes as “schemes of perception” that are rooted in social hierarchies, and thus our assessments reflect people’s relative positioning as much as their natural beauty. Bourdieu writes:

Thus, the gaze is not a simple universal and abstract power, as Sartre maintained: it is a symbolic power whose efficacy depends on the relative position of the perceiver and the perceived and on the degree to which the schemes of perception and appreciation that are brought into play are known and recognized by the person to whom they are applied (Bourdieu 2001:64–65).

In the present case, the variable representing interviewers’ perceptions of respondents’ physical attractiveness reflects the extent to which the respondents conform to the schemes and practices affirmed by highly educated, stably employed individuals who themselves occupy dominant positions in the sexual social field.

Despite these empirical and theoretical contributions, there are of course shortcomings to this research. First, despite being embedded in a longitudinal survey, the relationship scripts data used for this project were collected at a single point in time. The majority of female TLT respondents were married at the start of the survey, and average relationship duration approaches five years, so asking respondents to describe how their relationships unfolded from the beginning is necessarily a retrospective endeavor for this population. Further, collecting relationship scripts data during multiple survey waves was prohibitively expensive. While I know of no viable alternative, I recognize that the cross-sectional nature of the data collection

limit my ability to draw inference from these data, and I cannot rule out the possibility that some respondents are engaging in a kind of revisionist accounting of their own ideal and/or realized scripts.

Second, while the relationship scripts instrument provides an unprecedented amount of detail in aggregate-level data on sexual relationships in this context, the method as employed here is still somewhat limited in the scope of information it collects. While this research tells us that more educated women experience more of the events represented in the cards before having sex with their partners, we still don't know how sequential time corresponds to calendar time, something that demographers care deeply about. Respondents' accounts of their relationships are also constrained by the events selected for inclusion in this study, and respondents cannot include events that were particularly meaningful to them but are not in the card stack. And finally, the data do not provide insight into how relationship sequences correspond to other major life events, such as moving to a new residence, the death of a loved one, or periods of financial hardship.

This project opens several fruitful pathways of future inquiry. The analyses reported here demonstrate that the challenges inherent in carrying out complex survey modules in developing contexts are not insurmountable, and that such card-sort techniques reveal insights that would be concealed in typical demographic surveys. I hope that this project will be the first of several applications of card-sort methods in demographic surveys in the developing world. I plan to design a data collection procedure that will allow me to measure events in both sequential time and calendar time, through combining the relationship scripts method with the relationship history calendar recently used to examine sexual relationships in Kenya (Luke, Clark, and Zulu 2011). The addition of a timeline to the sequence collection would also facilitate the inclusion of non-relationship events.

The results of this project also point to the need to better understand precisely how schools structure sexual social fields. Which habits, skills, and bodily postures are most evocative of exposure to formal schooling? How has the expansion of access to education influenced the processes of social stratification that schools carry out? And to what extent are these processes gendered? Much of the emphasis and effort that schools place on sexuality is directed towards female students; do schools structure sexual fields for male students? Finally, how does "the algorithm of academic classification" (Bourdieu 1998:183) stratify sexual fields in other contexts? This study, and the questions that it inspires, will hopefully launch a new research agenda that will reveal further insights into how institutions shape the rituals and practices through which people foster intimacy.

# CONCLUSION

The studies included in this dissertation span a diverse set of methods and theories, and together provide a rich perspective on how shared cultural understandings of education influence individual life events. Chapter 2 established that the cultural system of meanings and practices surrounding education is intertwined with moral standards of sexual purity. In Chapters 3 and 4, I show that this moralistic perspective on education has real consequences for the educational and relationship outcomes of young adults in Malawi that can be observed in the aggregate. Specifically, I document in Chapter 3 that these pervasive cultural models guide the disciplinary actions of parents, the financial decisions of parents, and the schooling and relationship decisions of students themselves, and as a result, those who stray from the ideal of strict abstinence are more likely to leave school, despite the fact that their academic performance and classroom behavior do not seem to be affected. In Chapter 4, I demonstrate that these models seem to influence how relationships are experienced by women in Malawi, with more educated women more likely to be perceived as attractive and experiencing more events with their partners before having sex.

This dissertation is a first attempt to bring a combined culturalist and demographic perspective to bear on the connections between education and sexuality in sub-Saharan Africa. The findings point to an emergent theoretical agenda on how institutions stratify romantic life, and reveal several promising pathways for further inquiry. I take the opportunity of this conclusion to outline future research that I hope will build on these results and bring me closer to a comprehensive theory of institutional cultures and life transitions.

In particular, I hope to focus more deeply on the changing nature of the relationship between school culture and romantic life. By tracing the history back to the incipient educational endeavors of missionary settlers, I have shown in this dissertation that the roots of the connections between these two life domains run deep. However, social life in sub-Saharan Africa is characterized by widespread uncertainty and rapid social change. Yet my data are limited in their ability to examine how the opportunities and constraints that young people encounter, the relative position of specific people in the sexual social field, and the cultural system of education are themselves dynamic.

Many scholars have used metaphors of disorder and lack of certainty to describe daily life in Africa. Africa is where “all that is solid melts into air” (Berner 2000:5). It is where “no condition is permanent” (Berry 1993). It is “a geography of crisis,” leading to a sense of “existential disorientation” in everyday life (Mbembe and Roitman 1995:339). According to past research, this widespread uncertainty leads individuals to pursue strategies of action that prioritize breadth and contingency over depth and clarity, a “muddling through” where “learning at each stage informs action for the next step” (Berner 2000; Johnson-Hanks 2004; Elder 2000; Bledsoe

and Banja 2002). In the sections that follow, I outline three future projects through which I will attempt to extend the insights presented here by attending to these processes of social change.

## **CHANGE IN THE ASSOCIATION BETWEEN SEX AND SCHOOLING, 1985-2010**

We know that first sexual experiences are typically delayed for youth who have more education in sub-Saharan Africa. But as educational attainment across sub-Saharan Africa has increased dramatically over the past 20 years (particularly during the period immediately after the implementation of Universal Primary Education in each country), we know little about how the relationship between education and the timing of sexual experiences has changed. The timing of educational expansion varied widely across the sub-continent, providing an opportunity to examine the corresponding trends in the timing of first sexual experiences. Through this cross-national comparison, I will seek to understand how the relationship between educational experiences and sexual behavior has changed in response to shifting opportunity structures.

Two scenarios are possible. In scenario 1, cohort effects dominate, and the relationship between age at first sex and educational attainment is primarily tied to the fact that being in school is a marker of elite status. As educational credentials become more widespread, the level of education at which youth report a significantly later age at first sex relative to other members of their cohort will increase. In scenario 2, age effects dominate, and the relationship between age at first sex and schooling status is primarily due to other factors associated with attending school, besides relative social positioning. As schooling becomes more widespread, delayed age at first sex will itself be more widespread. This study will attempt to elucidate between these two possible outcomes.

I will use data from Demographic and Health Surveys administered in sub-Saharan Africa. The DHS are standardized and nationally representative household surveys that are primarily used to gather information on sexual and reproductive health, child health, and fertility. They include measures of age at first sex and marriage, as well as the highest year of education completed. I will include the 17 countries in sub-Saharan Africa in which at least two DHS surveys have been administered, and will use all available surveys for these countries, leaving me with a total of 64 surveys, covering a period of about 25 years, from 1987 to 2011.

I will use three methodological approaches. First, I will use direct standardization to examine how much of the change over time in age at first sex is due to increases in educational attainment (see Pierotti 2013 for a recent application of this technique using DHS data). This method poses the question: If you give people in past waves of DHS the current educational distribution, how would this change median age at first sex? Second, I will examine these two time trends graphically, comparing the proportions at each level of educational attainment with the distribution of age at first sex. And third, I will use a series of three regression models, all predicting age at first sex. In the first model, I will assume that age at first sex is simply a

function of age and schooling status and a series of control variables, independent of the cohort effects. In this model, I will pool together all of the samples, and model age at first sex by age and schooling status. In the second model, I will examine both age and cohort effects, including both the age and the birth year for each respondent. In the third model, I will include interaction terms between age and birth year, to test whether the age pattern is changing over time as schooling becomes more widespread.

## **LIFE AFTER SCHOOL LEAVING: CHANGING POSITIONS IN THE SEXUAL SOCIAL FIELD**

In Chapter 4, I show that measures representing respondents' position in the sexual social field explain a significant amount of the association between educational attainment and relationship trajectories. But the sexual social field in Malawi is not stable and fixed, but rather unpredictable and quickly changing. To examine how this context of widespread uncertainty and unpredictability affects processes of sexual stratification, I will examine narratives told by respondents who recently experienced a marked shift in their positioning in the social field, transitioning in a short period of time from ambitious students to school dropouts.

In selecting which TLT respondents to interview in 2011, I constructed a purposive sample, focusing on three categories of respondents, all of whom were enrolled in school in 2010: (1) respondents who, when surveyed in 2010, reported that they were highly optimistic about their chances of completing secondary school, and were still enrolled in school in 2011, (2) those who in 2010 were highly optimistic that they would complete secondary school but unexpectedly left school between 2010 and 2011, and (3) those who were not very optimistic about their chances of completing secondary school (giving themselves a 30% or lower chance) and were no longer in school in 2011. To examine changes in social positioning, I will compare respondents in group two with those in groups one and three, to determine how this unexpected closure of future horizons may be associated with unique perspectives and experiences.

The interviews include detailed relationship histories, as well as a series of questions about how respondents hope their relationships will unfold in the future. Comparing groups two and three will allow me to examine how perceptions and experiences of relationship experiences and future life-chances are different when the change in status is anticipated versus when it is unexpected. I will also be able to compare the two groups who were able to accurately predict their future status: those who expected to stay in school and did (group one), as well as those who thought they would leave school and did (group three). I will read with particular interest the interviews with respondents in group two who were in romantic relationships when they dropped out of school (e.g., Jennifer and Tawonga in Chapter 3) or who claim to have been falsely accused of being in a relationship (e.g., Chisomo and Tazona in Chapter 3), because I anticipate that it is

these students who will feel most poignantly the effects of rapid changes in life chances and social positioning.

By focusing on what happens when people experience a change in their social positioning—when formerly ambitious students are forced to come to terms with the shame and disappointment of dropping out of school—I will be able to incorporate this fluidity and uncertainty into my theory of sexual stratification, and to study the dynamic nature of sexual social fields. Through analyzing how these young adults reflect on and react to these unexpected and transformative life events, I hope to develop a theory of the dynamic nature of sexual social fields.

## **FEMALE UNIVERSITY GRADUATES AND THE MARRIAGE MARKET IN UGANDA**

Until recently, a stable system of marriage existed throughout sub-Saharan Africa: nearly everyone married, men were more educated than women, and women married “up” in educational attainment (Lloyd and Mensch 1999). Hypergamy, or men marrying women of lower social status, is fundamental to traditional systems of gender relations around the world (Basu 2002; Rose 2003). While differences in resources between men and their wives stem partially from general disparities in wealth and educational attainment, hypergamy transcends inequity in resource distribution and is instead a cultural expectation, entrenched in the schemas surrounding marriage and influencing people’s perceptions of the propriety of potential spouses (Esteve et al. 2012).

Recent trends in educational enrollment portend a change in this widespread cultural pattern. Beginning in the 1990s, policies aimed at providing “Education for All” led to a rapid increase in girls’ enrollment rates relative to boys’ (Moulton and Mundy 2002; Vavrus 2003). Across Southern and Eastern Africa, girls aged 10 through 18 now have significantly *higher* levels of educational attainment than their male peers (Grant and Behrman 2010). A recent study demonstrates that educational hypergamy has indeed declined around the globe in recent decades, including in Kenya, Malawi, Mali, Senegal, Uganda, and Tanzania, and that these declines directly follow gains in female educational attainment (Esteve et al. 2012).

College-educated women in Uganda are at the vanguard of this social transformation. Following the lead of other countries in the region, in 1997, the Ugandan government implemented Universal Primary Education, which led to a rapid increase in female enrollment in primary school (Deininger 2003). What is unique about Uganda’s experience, however, is the country’s emphasis on increasing gender parity in *tertiary* education (Mama 2003). Beginning in 1991, the national university, Makerere University instituted the “1.5 point rule” whereby female applicants received additional points on the university entrance examination, and a scholarship fund for female students was established in 2001 as part of a university-wide Gender Mainstreaming Program (Kwesiga and Ssendiwala 2006). While in 1990 only 25% of Makerere’s



students were female, this proportion rose to 43% in 2003, and in 2010, for the first time, a majority (50.4%) of the university's 13,766 graduates were female (Tibatemwa-Ekirkubinza 2010).

This portends a shift in marriage patterns. As women's schooling attainment increases more rapidly than men's, educated women face a smaller pool of marriageable men, according to the norm of hypergamy. The strategies employed by college-educated women as they struggle to maintain their elite status in the face of a constricted marriage market are beginning to rewrite the cultural narratives surrounding marriage in contemporary African society. I will carry out this project through a combination of in-depth interviews and ethnographic research, conducted over a series of three fieldwork periods of three months each. I will conduct semi-structured interviews with female and male Makerere students, as well as recent alumni, to examine how individuals reflect on and interpret their experiences in a formal setting. In order to examine how issues related to dating and marriage are discussed in more informal settings, I will use an innovative method that was developed for use in gathering information on sexual partnerships in sub-Saharan Africa: *hearsay ethnography* (Watkins and Swidler 2009). First designed by Susan Watkins (2004), hearsay ethnography involves the analysis of conversational journals in which cultural insiders describe and reflect upon conversations that they overhear or participate in related to the topic of interest.

The empirical case of the marriage squeeze among educated Ugandans will allow me to examine the process through which cultural schemas and narratives themselves change. Beginning in the 1960s (Garfinkel 1967; Geertz 1966; Wrong 1962), theorists of culture abandoned the "fixed" functionalist theories of their forebears, and enthusiastically embraced the premise that culture is not static but fluid, not causative but generative (DiMaggio 1997; Lamont and Small 2008; Swidler 1986). Yet a key criticism of these new models of culture is that despite their theoretical insistence on culture as dynamic and changing, the *mechanisms* through which culture is said to influence action elucidate reproduction rather than change (e.g., Elder-Vass 2007; Emirbayer and Mische 1998; King 2000; Sewell 1992).

Since Swidler's seminal essay highlighting "unsettled times," scholars of culture have turned to moments of societal upheaval in order to better understand how cultural materials—schemas, narratives, frames, and models—are themselves dynamic (Bourdieu 2000; Lizardo and Strand 2010; Swidler 1986). Yet these moments are often difficult to foresee and thus empirically challenging to study. Most extant analyses of unsettled times are retrospective, piecing together the transformation of cultural forms after times have once again settled, and thus are ultimately unsatisfying in their illumination of the unfolding process of changing cultural forms (Beck and Beck-Gernsheim 1995; Blair-Loy 2001; Perrin 2005; Polletta 1998). Decades after the "cultural turn" in sociology, we know surprisingly little about how schemas, repertoires, frames, and narratives evolve in response to changing life conditions. The rapid increase in female educational attainment in sub-Saharan Africa and the pressure placed on the system of

hypergamy provide a rare opportunity to *prospectively* examine the process of changing cultural forms.

As educational opportunities expand and as relationship and family forms become increasingly diverse, the choices and behavior of young adults in sub-Saharan Africa are shaped by ongoing tensions between traditional norms valorizing women's domesticity and male authority and modern, ideals of career women and egalitarian relationships. Through my long-term research agenda, I hope to develop an empirically grounded theory of how collective ideals and individual actions influence each other and evolve in the face of changing life conditions.

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# APPENDICES

## APPENDIX 1: SUPPLEMENTARY FIGURES AND TABLES FOR CHAPTER 2

**Table A1: Timing of TLT Survey Waves and Sample Attrition**

<b>Wave</b>	<b>Time Period</b>	<b>Total Random Sample N (% of W1 Sample)</b>	<b>Subsample: In School at Wave 1 N (% of W1 Subsample)</b>
1	June to August, 2009	2,045 (100%)	843 (100%)
2	October to December, 2009	1,952 (95%)	814 (97%)
3	February to April, 2010	1,895 (93%)	777 (92%)
4	June to August, 2010	1,855 (91%)	757 (90%)
5	October to December, 2010	1,752 (86%)	709 (84%)
6	February to April, 2011	1,708 (84%)	686 (81%)

**Table A2: Comparison of the Analytic Subsamples Used to Examine Each Schooling Outcome**

Outcome of Interest	School Leaving	School Leaving	School Absence	School Performance	School Performance
<b>Dependent Variable Measure</b>	Leaving School over time, waves 2-6	Leave School between wave 1 and wave 6	Absence	Test Scores	Trouble in School
<b>Statistical Model</b>	Fixed Effects Logistic Regression (Table 6)	Logistic regression (Table 6)	Fixed Effects Logistic Regression (Table 2)	OLS regression (Tables 3)	Fixed Effects Regression (Table 2)
<b>Sample Exclusions</b>	<ul style="list-style-type: none"> <li>• 84 respondents in their final year of secondary school at wave 1</li> </ul>	<ul style="list-style-type: none"> <li>• 84 respondents in Form 4 at wave 1</li> <li>• 120 respondents who were lost to follow-up or migrated between wave 1 and wave 6</li> <li>• 8 respondents with missing values for explanatory variables</li> </ul>	None	<ul style="list-style-type: none"> <li>• 86 respondents who were lost to follow-up or had migrated by wave 4</li> <li>• 132 respondents who left school by wave 4</li> <li>• 44 respondents did not provide test scores</li> <li>• 8 respondents with missing values</li> </ul>	None
<b>Descriptive Statistics</b>					
N	759	631	843	573	843
Male	38%	39%	37%	38%	37%
Average Age (s.d.)	16.5 (1.6)	16.4 (1.6)	16.7 (1.7)	16.4 (1.6)	16.7 (1.7)
Average SES Score (s.d.)	0.28 (2.47)	0.07 (2.31)	0.57 (2.64)	0.43 (2.56)	0.57 (2.64)
<b>Education at Wave 1</b>					
Lower Primary	14%	15%	13%	15%	13%
Upper Primary	48%	50%	43%	47%	43%
Lower Secondary	28%	28%	26%	25%	26%
Upper Secondary	9%	7%	18%	13%	18%
In a relationship, wave 1	24%	23%	30%	20%	30%



**Table A3: Schooling Outcomes by Relationship Type**

	Single	Committed Sexual Relationship	Casual Sexual Relationship	Non-Sexual Romantic Partner
<b>Female Respondents</b>				
Absent from School <sup>a</sup> (%, Person-waves)	30%	33%†	34%†	30%
Mean Test Score (s.d.) <sup>b</sup>				
English	49.35(16.47)	44.73 (14.84)*	47.31 (18.39)	49.74 (18.43)
Math	54.09 (15.39)	53.47 (13.25)	50.33 (14.22)†	56.26 (15.49)
Trouble in School <sup>b</sup> (%, Person-waves)	26%	24%	25%	22%
Leave School <sup>b</sup> (%, Person-waves at risk)	21%	42%***	50%***	23%
<i>N</i>	292	124	30	82
<b>Male Respondents</b>				
Absent from School <sup>a</sup> (%, Person-waves)	30%	39%*	40%*	28%
Mean Test Score (s.d.) <sup>b</sup>				
English	54.02 (20.11)	55.81 (16.93)	53.00 (16.89)	53.24 (18.14)
Math	53.79 (14.20)	55.56 (14.92)	57.88 (17.14)	56.96 (13.89)
Trouble in School <sup>b</sup> (%, Person-waves)	36%	42%†	38%	35%
Leave School <sup>b</sup> (%, Person-waves at risk)	15%	21%*	26%*	12%
<i>N</i>	187	50	43	35

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001; stars indicate significant results when compared to single respondents using a one-tailed t-test.

<sup>a</sup> Because the absence measure specifically refers to the week immediately preceding the survey interview, relationship status is measured at the same wave as absence (not lagged).

<sup>b</sup> Relationship status is lagged one wave.

**Table A4: OLS and Doubly-Robust Propensity Score Models Predicting Examination Scores (Percents)**

OLS Regression Models	Female		Male	
	English Coeff./ <i>(se)</i> (1)	Math Coeff./ <i>(se)</i> (1)	English Coeff./ <i>(se)</i> (3)	Math Coeff./ <i>(se)</i> (3)
In a Sexual Relationship	-3.00 (2.97)	-2.42 (3.08)	0.17 (3.20)	2.52 (3.75)
Background Characteristics				
Age	-1.17 (0.70)	-1.11 (0.73)	-1.16 (0.70) <sup>†</sup>	-0.59 (0.82)
Socio-economic status	0.59 (0.36)	-0.03 (0.36)	-0.47 (0.50)	0.37 (0.60)
Level of School				
Lower Primary	-4.75 (3.52)	5.30 (0.36)	-5.13 (4.18)	0.70 (5.12)
Upper Primary	---	---	---	---
Lower Secondary	-3.94 (2.17) <sup>†</sup>	-7.71 (2.26)**	-2.45 (2.63)	-12.81 (3.27)***
Upper Secondary	3.10 (2.85)	-12.47 (2.90)***	5.13 (3.33)	-10.92 (4.15)**
Attitudes and Expectations Related to Education				
Would feel unsatisfied leaving school	10.36 (3.28)	12.32 (9.06)	20.09 (15.04)	11.06 (18.04)
Probabilistic estimate of being in school in 1 year	0.28 (0.30)	-0.03 (0.32)	0.11 (0.48)	-0.37 (0.57)
Plans to attend college	0.96 (1.99)	2.22 (2.10)	1.49 (1.51)	-0.97 (3.02)
R <sup>2</sup>	0.07	0.13	0.06	0.13
<b>Doubly Robust Propensity Score Models<sup>a</sup></b>				
Average predicted value if no respondents were in a relationship at wave 3	54.67	48.31	54.89	53.74
Average predicted value if all respondents were in a relationship at wave 3	50.55	47.06	51.90	55.04
Difference in predicted values (estimate of effect size of sexual relationship status on tests scores)	-4.11 (2.68)	-1.25 (2.83)	-2.99 (2.90)	1.30 (3.11)
N	347	347	214	214

Notes: <sup>†</sup>=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001.

<sup>a</sup> The doubly-robust models account for the same list of cofounders as the OLS model results (described in Appendix 1, Table A5). All covariates were observed at wave 3 (one wave before test scores were recorded).

**Table A5: Fixed Effects Time Series Logistic Regression Models Predicting Having Trouble in School, Waves 2-6**

	Trouble in school during four months preceding interview <sup>a</sup>	
	Female OR/(se) (3)	Male OR/(se) (4)
Respondent was in a sexual relationship	0.87 (0.25)	1.16 (0.32)
Socio-economic Status	0.99 (0.08)	1.33 (0.16)*
Current Year in School	1.39 (0.16)**	1.39 (0.18)*
Trouble paying school fees over past 4 months	1.11 (0.17)	1.23 (0.21)
Decline in health over past 4 months	1.07 (0.43)	1.37 (0.22)†
Probabilistic estimate of being in school in 1 year	0.99 (0.03)	1.03 (0.05)
Employed	2.77 (2.70)	0.30 (0.37)
Observations (Respondents)	899 (208)	635 (145)

Notes: †=0.10, \*=0.05, \*\*=0.01, \*\*\*=0.001.

<sup>a</sup> All independent variables are lagged by one survey wave, so that variables measured at each point in time predict having trouble in school over the next four months.

## APPENDIX 2: REGRESSION EQUATIONS FOR CHAPTER 2

### *Fixed-Effects Models: Tables 3, 4, 5*

First, I define the following terms:

$\pi_{it}$  = Probability that individual  $i$  experiences the outcome at time  $t$ .

$\underline{X}_{it}$  = A vector of observed individual characteristics that vary over time

$\underline{z}_i$  = A vector of variables that vary over individuals but are constant over time

$\alpha_i$  = Unobserved individual characteristics that are constant over time

$u_{it}$  = Error term

The fixed-effects model is defined as:

$$\ln\left(\frac{\pi_{it}}{1 - \pi_{it}}\right) = \beta\underline{X}_{it} + \gamma\underline{z}_i + \alpha_i + u_{it}$$

Because the fixed-effects model predicts changes in the outcome variable based on changes in predictor variables, all time-invariant terms in the model, including  $\underline{z}_i$  and  $\alpha_i$ , will drop out. Thus, fixed-effects models control for all observed and unobserved individual-level variation that is fixed over time.

For cases with more than two observations per individual, fixed-effects logistic regression models are estimated using conditional maximum likelihood estimation (Allison 2009; Treiman 2009). These models are estimated in this article using the xtlogit, fe command in Stata 1.

### *Doubly-Robust Propensity Score Models: Table 3, 5, A4*

First, I denote an individual,  $i$ , from a sample of size  $N$  to have received a binary exposure,  $A_i$  [ $i=1$  for treatment (respondent reported having a current sexual partner at wave 1),  $i=0$  for control (respondent did not report a sexual partner at wave 1)]. Let  $Y_{i,1}$  and  $Y_{i,0}$  be the counterfactual posttest outcomes (whether or not the respondent has dropped out of school by wave 6) under treatment and control, respectively. Which outcome is observed ( $Y_{i,1}$  versus  $Y_{i,0}$ ) depends on the treatment variable  $A_i$ .  $\underline{X}_i$  is a vector of all baseline variables. I am interested in estimating  $\Delta$ , or the average change in outcome given the treatment, which is estimated as the difference in expected value of the outcome for those receiving the treatment compared to those receiving the control, or  $E(Y_{i,1}|\underline{X}_i) - E(Y_{i,0}|\underline{X}_i)$ .

The propensity score component of the model is defined as the probability of experiencing the treatment given the subject's observed characteristics  $\underline{X}_i$ , or  $\pi_i = \Pr(A_i = 1 | \underline{X}_i)$ . The doubly-robust method uses the inverse probability of treatment weight (IPTW) method, in which propensity scores  $\hat{p}_i$ , which are the predicted values from a logistic regression model predicting  $A_i$  based on  $\underline{X}_i$ , are used to specify inverse probability of treatment weights (IPTWs). The inverse weights are equal to  $1/\hat{p}_i$  if  $A_i=1$  and  $1/(1-\hat{p}_i)$  if  $A_i = 0$ .

The IPTW propensity score estimation of  $\Delta$  is:

$$\hat{\Delta}_{IPTW} = \frac{1}{N} \sum_{i=1}^N \left( \frac{A_i Y_i}{\hat{p}_i} \right) - \frac{1}{N} \sum_{i=1}^N \left\{ \frac{(1-A_i) Y_i}{1-\hat{p}_i} \right\}.$$

The doubly-robust model also incorporates a term specifying the predicted values from regressions of the outcome on the baseline covariates, in this article either logistic regression predicting leaving school between wave 2 and wave 6 or ordinary least squares regression predicting test scores at wave 4 based on  $\underline{X}_i$ , where the regressions are carried out separately for each treatment group ( $A_i=1$  versus  $A_i=0$ ). This term is defined as  $m_A(\underline{X}_i) = E(Y_i | A_i = A, \underline{X}_i)$  for  $A=0$  or  $A=1$ .

The doubly-robust estimator of  $\Delta$ , as defined by Lunceford and Davidian (2004) and designed for Stata by Emsley et al (2008) is:

$$\hat{\Delta}_{DR} = \frac{1}{N} \sum_{i=1}^N \left\{ \frac{A_i Y_i - (A_i - \hat{p}_i) m_1(\underline{X}_i)}{\hat{p}_i} \right\} - \frac{1}{N} \sum_{i=1}^N \left\{ \frac{(1-A_i) Y_i + (A_i - \hat{p}_i) m_0(\underline{X}_i)}{1-\hat{p}_i} \right\}$$

These models were estimated using the dr command in Stata10.

## APPENDIX 3: METHODOLOGICAL APPENDIX FOR CHAPTER 4

### Overview of Optimal Matching Approach

The optimal matching approach, rooted in computer science (Hamming 1950), seeks to uncover similarities and differences in overall trajectories (Abbott 1995). The algorithm compares each pair of sequences in the data, and the output of optimal matching is a dissimilarity matrix, which gives a score for how different each sequence is from each other sequence in the sample. Optimal matching algorithms estimate the dissimilarity, or distance, between pairs of sequences in terms of how many changes an analyst would have to make in order to convert one sequence into the other (Abbott and Hrycak 1990; Abbott and Tsay 2000; Aisenbrey and Fasang 2010). There are two fundamental types of changes that are used in optimal matching analyses: *indel* (i.e., inserting and deleting cards)<sup>44</sup> and *substitution* (i.e., exchanging one card for another). Each change is assigned a cost, and an optimal matching algorithm tries all possible combinations of these two types of changes for each pair of sequences, and selects the combination with the minimum total cost; this total cost is the distance score for that sequence pair.

While early optimal matching analyses weighted all types of changes equally, it is now understood that the relative weight assigned to substitution versus *indel* costs is a substantive decision depending on the type of information contained in the sequences (Aisenbrey and Fasang 2010; Lesnard 2010). Substitutions alter the patterning of events within a sequence, while insertions and deletions alter the temporal dimension of all other elements in the sequence. If the ratio of substitution to *indel* is set to less than 1, the algorithm favors matches that preserve the *contemporaneity of sequences*, or the extent to which the sequences are aligned over “time” (in this case, the number of steps). If the ratio of substitution to *indel* is greater than 1, the researcher is favoring matching that reveals *common subsequences*, regardless of where they occur in the two sequences. I follow Lesnard (2010), who suggests that for most topics of inquiry within the social sciences, contemporaneity is more meaningful than common subsequences, which can distort the temporal dimension of sequences. Following Stovel, Savage, and Bearman (1996) and Harding (2007), I define insertion and deletion costs as the maximum substitution cost.

The substitution costs are assigned according to the transition rates for each pair of elements observed in the complete set of realized and ideal sequences in the data (Abbott and Tsay 2000; Harding 2007; Hollister 2009). The transition rate between state  $i$  and state  $j$  is the

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<sup>44</sup> Deleting an element from one sequence and inserting an element into the other sequence are considered synonymous from the perspective of calculating the distance between two sequences.

probability of observing state  $j$  at time  $t+1$  given that state  $i$  has been observed at time  $t$ , or  $p(i|j)$ . For  $i \neq j$ , the substitution cost is equal to the inverse of the sum of conditional probabilities for each pair, or  $2 - [p(i|j) + p(j|i)]$ . In this particular analysis, for the realized sequences the substitution costs average 1.81 and range from 1.567 for “we had sex” and “I got pregnant” to 1.947 for “we had sex” and “I introduced my partner to my parents/my partner introduced me to his parents.” Following Harding (2007) and Abbot and Hrycak (1990), I account for variation in sequence length by normalizing the distance score for each pair of sequences; specifically, I divide each distance score by the length of the longer script, so that the distance score reflects the average cost per event in the longer script. Distance scores range from 0.116 to 1.873, with a mean value of 1.37.

## Overview of Hierarchical Clustering

Cluster algorithms typically use a measure of similarity or distance to partition data into groups, such that observations within the same group are as alike as possible. There are three main classes of cluster algorithms: hierarchical, flat, and model-based. Hierarchical clustering algorithms output a hierarchy or “tree” of consecutive clustering, such that the solution for  $k+1$  clusters is structurally similar to the solution for  $k$ , with one of the  $k$  clusters branching into two smaller clusters. Agglomerative algorithms begin with all data in separate clusters, and merge the two groups that minimize the average within-cluster variance or distance measure specified by the algorithm. Divisive clustering algorithms, the other class of hierarchical clustering techniques, begin with all of the data in one cluster and recursively split the data into larger and larger numbers of clusters. The main advantage of the hierarchical approach is that it provides a complete set of solutions, thus the researcher need not specify the desired number of clusters. Further, the hierarchical nature of the cluster solutions provide insight into relationships between the different clusters (Aldenderfer and Blashfield 1984; Everitt et al. 2011).

Flat clustering algorithms, on the other hand, generate independent sets of clusters for each  $k$  number of clusters. While this approach assumes no hierarchical or probabilistic structure to the data, flat clustering algorithms require the researcher to specify the number of clusters, and the partitions can be radically different if an additional cluster is added. This method also works best on data with well-defined centers, which is difficult to ascertain independently of the clustering process (Manning, Raghavan, and Schütze 2008).

The third class of clustering algorithms, model-based, assume that the data are generated by a mixture of underlying probability distributions in which each component represents a different cluster. Model-based algorithms are advantageous because they are based on statistical theory rather than heuristics, and thus the results of this method are more interpretable than those that come from the other two approaches. This method has long been found to be effective in clustering low-dimensional data, and recent developments have extended the method to high-dimensional data as well (Murphy, Dean, and Raftery 2010; Oh and Raftery 2007).

Unfortunately, clustering the sequence data based on results of optimal matching requires that a pre-existing dissimilarity matrix be specified, and model-based algorithms do not require a dissimilarity matrix, thus this method is not well-suited to the present study.

### **Choice of Clustering Algorithm**

I used three different clustering algorithms: two different agglomerative clustering procedures (weighted average and Ward's method) and a flat clustering algorithm, partitioning around medoids (PAM). The weighted-average method merges the two clusters for which the average distance between all pairs of items, one in each cluster, is minimized; these distance values are weighted to reflect differences in the sizes of the clusters (Izenman 2008). Ward's method merges the two clusters which will minimize the increase in the total within-cluster error sum of squares (Everitt et al. 2011). Partitioning around medoids is similar to k-means clustering, but rather than clustering the data around the center point of each cluster, the data are clustered around the observations that are most centrally located within each cluster, known as the "medoids." This method has proven to be less sensitive to outliers, and to provide more reliable solutions than k-means (Velmurugan and Santhanam 2008). For each method, I examined three-, four-, and five-cluster solutions.

The weighted average method generated clusters of vastly unequal size, with two out of the five clusters in the five-cluster solution comprised of fewer than 15 respondents. This is not uncommon for this type of clustering algorithm (Everitt et al. 2011), but limits the utility of this method for the purposes of identifying broader groupings within the data. In the interest of maintaining clusters with a minimal size of 50 respondents to allow for descriptive and statistical comparisons of the sequences between clusters, this method was rejected. On the other hand, both the Ward's and PAM methods are known to generate clusters that are similar in size in cases where other algorithms find clusters with very few observations (Aldenderfer and Blashfield 1984). Both methods resulted in solutions in which the smallest cluster was around 100 (98 for Ward's, 122 for PAM). The results were largely similar between PAM and Ward's: over 70 percent of the observations were clustered into the same groups in both algorithms. After examining the results descriptively using sequence index plots (see Figures 3-5) and summary statistics (see Table 8), Ward's seemed to produce the most meaningful clusters in terms of differences in relationship sequences as well as the extent to which cluster membership is correlated with other variables of interest. For this reason, I chose to use Ward's method.

### **Choice of Cutoff Point to Determine Number of Clusters**

The Ward's clustering algorithm is agglomerative, meaning that it begins with each data point in its own separate cluster and merges the data into increasingly smaller clusters at each step. The algorithm produces a "tree" of varying numbers of clusters, and the researcher must select the optimal number of clusters. This process is somewhat subjective; ultimately the "best"

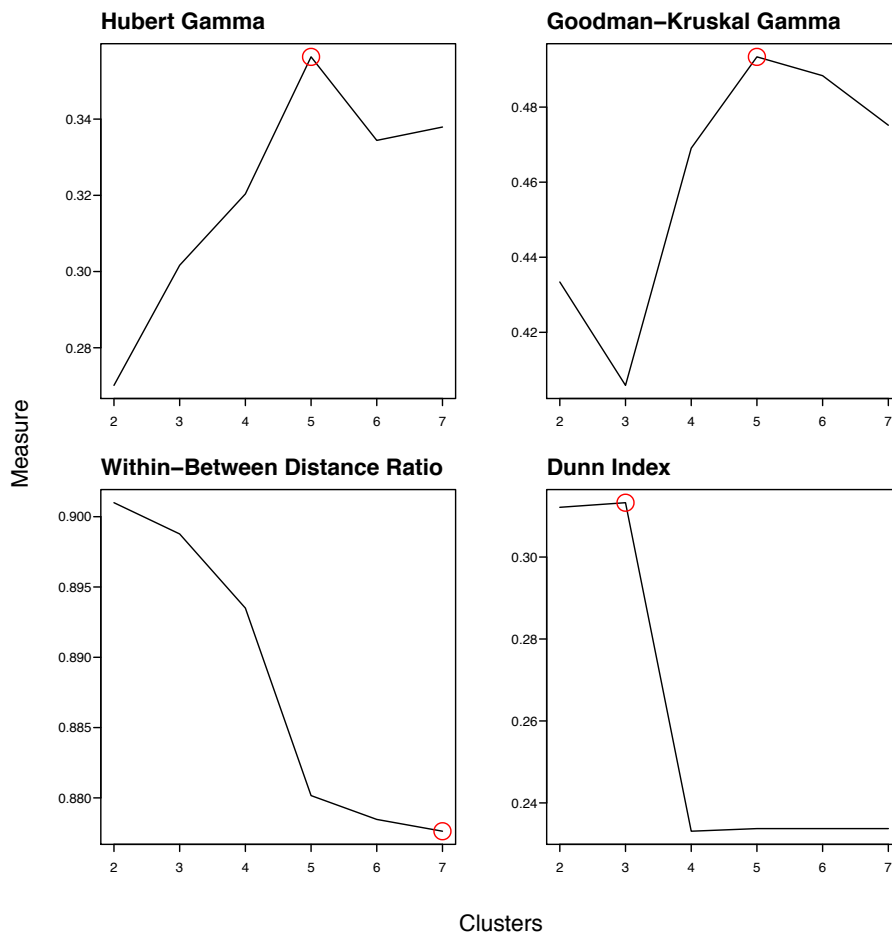


number of clusters is the number that produces the most informative and useful groupings of patterns in the data, and this number can vary depending on the goals of the analyst and the attributes of particular empirical cases (von Luxburg, Williamson, and Guyon 2012). I first limited my consideration to seven or fewer clusters, due to issues of sample size— the eight-cluster solution produced clusters with less than 50 individuals. I then used four cluster validation indices that are designed to provide estimates for how well a partition fits the structure underlying the data. Most cluster validation indices estimate cluster *cohesion*, or within-cluster similarity, and cluster *separation*, or between-cluster similarity, and combine them to produce a single measure (Arbelaitz et al. 2013).

Variation in the optimal solutions across different indices is common (Arbelaitz et al. 2013; Milligan and Cooper 1985), and researchers often use a combination of different indices. I use the Hubert Gamma, the Goodman-Kruskal Gamma, and the Within-Between Distance Ratio, and the Dunn Index. For the two Gamma measures and the Dunn Index, higher values represent more optimal clustering solutions, while for the Within-Between Distance Ratio, lower values represent more optimal solutions. The Goodman-Kruskal and Hubert Gamma Indices represent comparisons between within-cluster and between-cluster distance values; the Hubert's Gamma Index uses a more complex method to control for the probability of being selected and normalizes the score so that it varies between  $-1$  and  $1$  (Hubert and Arabie 1985). The Within-Between Distance Ratio compares the average distance score for pairs of observations within the same cluster to pairs in different clusters, with lower values representing more optimal solutions. As Aisenbrey and Fanang (2010:432) point out, this measure is particularly germane to the task of comparing clusters of sequences because it uses the pairwise distances generated from the optimal matching process. In the Dunn Index, cohesion is measured by the nearest neighbor distance, with separation represented by the maximum cluster diameter (Arbelaitz et al. 2013).

The results of the cluster validation indices are provided in Figure A1. The top two panels in Figure A1 show support for a five-cluster solution; both reach their maximum value at this number of clusters. The graph corresponding to the Within-Between Distance Ratio reaches the optimum value at seven clusters, but the value for five clusters represents an “elbow” in the graph, with the slope leveling off significantly after this point (Garip 2012; Liu et al. 2010). For the Dunn Index, the optimal solution appears to be three.

**Figure A1: Cluster Validation Indices Across Number of Clusters**



A conservative approach would be to retain only the maximum number of clusters for which there is support across the four tests, which in this case is three.<sup>45</sup> Indeed, these results lend strong support for three distinct groupings of sequences: those who get married before having sex, those who have sex very early on in their relationships, and those who have sex later in their relationships but still report having sex with their partners before getting married. The statistical support is somewhat weaker for the additional two distinctions that emerge in the five-cluster solution, distinguishing the two clusters in which women get married before having sex (Village Wedding versus Dating and Waiting) and the two clusters in which women report premarital sex after a number of other events (Modern Romance versus Delayed Sex then Marriage). However, when hierarchical algorithms are used, the error of choosing too few

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<sup>45</sup> In agglomerative clustering algorithms, because clusters are merged together to form solutions with fewer partitions, a test that provides support for a solution with  $n$  clusters by nature also provide partial support for fewer than  $n$  clusters.

clusters is considered more serious than the error of choosing too many, because information is lost by merging clusters together that are actually distinct (Milligan and Cooper 1985:159). When the cluster solutions were examined using sequence index plots (Figures 3-5), these additional two partitions were found to be substantively resonant. Specifically, the five-cluster solution reveals how relationships with similar orderings of marriage and sexual intercourse are preceded and followed by different constellations of other events, which provide unique combinations of social, institutional, and moral legitimacy to these different groupings. The additional two clusters that emerge in the five-cluster solution also map neatly onto differences in educational attainment. Because these partitions add nuance and substance to the analysis, I retain them.

An alternative method of evaluating the results of an agglomerative clustering algorithm is using a dendrogram, which is a “highly interpretable complete description” of the hierarchical clustering in a visual format (Hastie, Tibshirani, and Friedman 2009:521). In a dendrogram, the vertical axis represents the distance measure used in the clustering algorithm (in the case of Ward’s, squared Euclidean distances), and the point at which two clusters merge together shows how similar the data in the two clusters is to each other. Clusters that are more similar merge at lower heights, while those that represent structurally sound distinctions merge at higher heights. Using the dendrogram as a visual guide, the researcher can choose the “cut point” above which the clusters appear more distinct (looking for longer vertical segments between the branches) and below which the clusters merge at shorter distances. The dendrogram for the relationship sequence optimal matching is provided in Figure A2, and offers further support for the five-cluster solution (the red line in the figure). Below this cutoff, the clusters appear substantially less distinct, as evidenced by the closeness of the branches at which two clusters merge together.

### **Robustness Checks for Causal Direction**

The mediation perspective requires that the primary causal direction run from educational status to relationship sequences. Alternatively, it is plausible that the reason underlying the positive association between schooling attainment and the sequential ordering of sex within relationships is that people who had sex early on in their relationships dropped out of school as a result of their sexual behavior, due to pregnancy or marriage. Thus relationship patterns would shape educational attainment, and not the other way around. Chapter 3 of this dissertation examines this causal direction, using the in-school TLT sample. I find that women who report being in a sexual relationship while in school do indeed face a higher likelihood of dropping out of school.

In this study, I examine committed and mostly long-lasting relationships among the full TLT sample. Being in a committed sexual relationship while in school is a rare event for this age group, and most respondents met the partners they are reporting on after having left school. Thus, it is unlikely that negative ramifications of sexual relationships are the primary

mechanism through which educational attainment and relationship sequences are correlated. To be sure, I conducted three robustness checks with different sample limitations, in an effort to isolate the causal direction flowing from educational attainment to relationship sequence patterns (results available upon request). First, I limited the sample to respondents who reported starting their relationship with their partner after leaving school (N=633). Second, I included only those who reported first having sex (with any partner) after leaving school (N=487). And third, I ran the model after having excluded women who attribute leaving school to marriage or pregnancy (N=677). In each case, the association between educational attainment and the sequential order of the sex card remains highly statistically significant ( $p < 0.001$ ). This leads me to conclude that the primary causal direction indeed runs from educational attainment to relationship sequence patterns.

**Figure A2: Dendrogram for Hierarchical Clustering of Optimal Matching Results**

