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**YOUNG PEOPLE'S GENDER ROLE ATTITUDES
OVER THE TRANSITION TO ADULTHOOD IN EGYPT**

**May Gadallah, Rania Roushdy
and Maia Sieverding**

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Abstract

Change in gender role attitudes is a neglected dimension of research on the transition to adulthood in the Middle East and North Africa that has broad implications for young people's outcomes, as well as attitudinal change in the region over time. Using a life course framework, we examine the reciprocal relationship between attitudes formation and two key transitions in young people's lives: the transition to marriage and parenthood, and young women's transition to labor force participation. In order to address the simultaneity of attitudes formation and transitions, we exploit the panel dimension of the Survey of Young People in Egypt 2009 and 2014, estimating the impact of attitudes in 2009 on the likelihood of making transitions between 2009 and 2014, then the impact of those transitions on attitudes in 2014. We find that young women with more egalitarian attitudes are more likely to enter the labor market but, contrary to most international literature, entering the labor market does not have a corresponding liberalizing effect on women's attitudes. Rather, entering the labor force leads to more conservative attitudes regarding the gender dynamics of household decision-making. This may reflect the challenges women face in balancing work and family, and suggests that women may compensate for working outside the home – which may be perceived as having a negative effect on their families – by developing more conservative attitudes regarding household dynamics. As in other contexts, the transition to marriage and parenthood is associated with increasing conservatism in young people's attitudes.

JEL Classification: J1

Keywords: Gender, youth, Egypt, labor market, adulthood

ملخص

إن التغيير في مواقف دور الجنسين هو بعد مهم من البحوث حول التحول إلى مرحلة البلوغ في الشرق الأوسط وشمال أفريقيا التي لها آثار واسعة النطاق على انتاجية الشباب، فضلاً عن تغيير المواقف في المنطقة مع مرور الوقت. وباستخدام إطار دورة الحياة، ندرس العلاقة المتبادلة بين تشكيل المواقف واثنين من التحولات الرئيسية في حياة الشباب: الانتقال إلى الزواج والأبوة، والانتقال من الشباب إلى المشاركة في القوى العاملة. ومن أجل معالجة تزامن تشكيل المواقف والتحولات، نستغل البعد الخاص ببرنامح مسح الشباب في مصر 2009 و2014، وتقدير أثر المواقف في عام 2009 على احتمال إجراء التحولات بين عامي 2009 و2014، ثم التأثير من تلك التحولات في المواقف في عام 2014. ونجد أن الشباب اللواتي يتمتعون بمزيد من المواقف المتساوية يرجح أن يدخلن سوق العمل، ولكن الدخول إلى سوق العمل ليس له تأثير مقارن على مواقف المرأة، خلافا لمعظم الأدبيات الدولية. وبدلاً من ذلك، يؤدي دخول القوة العاملة إلى مواقف أكثر تحفظاً فيما يتعلق بالديناميات النوعية في صنع القرار الأسري. وقد يعكس ذلك التحديات التي تواجهها النساء في تحقيق التوازن بين العمل والأسرة، ويشير إلى أن المرأة قد تعوض عن العمل خارج المنزل - وهو ما يمكن أن ينظر إليه على أنه يؤثر سلباً على أسرته - من خلال تطوير مواقف أكثر تحفظاً فيما يتعلق بديناميات الأسر المعيشية. وكما هو الحال في سياقات أخرى، يرتبط الانتقال إلى الزواج والأبوة بزيادة النزعة المحافظة في مواقف الشباب.

1. Introduction

Gender role attitudes – or individuals’ support for the notion of separate spheres for men and women – have wide-ranging consequences for outcomes including female labor force participation, the household division of labor, age at marriage, and gender-based violence (Davis and Greenstein 2009). Gender role attitudes are shaped during childhood in the natal household, but research has shown that attitudes undergo heterogeneous changes among young people as they pass through the transition to adulthood, making the causal relationships between life events and attitudes formation challenging to identify (Thornton, Alwin, and Camburn 1983; Fan and Marini 2000; Moors 2003; Cunningham et al. 2005). Although existing literature has demonstrated that gender role attitudes are not static and have important implications for how we understand the transition to adulthood, this literature is based entirely on data from high-income countries. There is little evidence on change in gender role attitudes during the transition to adulthood among young people in low- and middle-income countries.

In the Middle East and North Africa (MENA), gender role attitudes among young people are highly conservative, and young people face a number of challenges in transitioning from education to employment and family formation. In this context, tracking change in gender role attitudes over the transition to adulthood is important for understanding broader social trends in the region. Using nationally representative data from the Panel Survey of Young People in Egypt 2009 – 2014, we therefore address two research questions: (1) How do gender role attitudes affect the likelihood of youth completing labor force and family formation transitions? And (2) How does completing different life transitions affect young people’s gender role attitudes?

2. Literature Review

2.1 The formation of gender role attitudes

We use the term “gender role attitudes” to mean individuals’ support for the notion of separate spheres for men and women in any domain of life, both inside and outside the home (Davis and Greenstein 2009). We refer to support for separate spheres in any of these domains as “conservative” gender role attitudes, and support for equal roles for men and women as “egalitarian” attitudes. Although experiences in the natal household play an important role in shaping young people’s gender role attitudes (Thornton, Alwin, and Camburn 1983; Fan and Marini 2000; Davis 2007), research has also shown that gender role attitudes may change over the transition to adulthood. In particular, natal family effects start to recede during adolescence when young people begin to encounter broader social influences and prepare for major life transitions (Davis 2007).

Two major theoretical approaches offer explanations for why gender role attitudes may change over the course of an individual’s life. Interest-based explanations argue that the degree of an individual’s support for gender egalitarian attitudes will depend on how egalitarianism does or does not benefit their own life goals (Bolzendahl and Myers 2004). This theory explains why women tend to hold more egalitarian gender role attitudes than men in many settings, as culturally women are expected to gain more from egalitarianism (Bolzendahl and Myers 2004; Davis 2007). The interest-based perspective implies that a young person’s gender role attitudes may change if he or she enters a new life situation that changes how egalitarianism affects his or her interests. For example, men’s attitudes may become more conservative when they enter marriage because they stand more to gain from the household division of labor. On the other hand, if a man benefits from his wife’s employment, marriage may cause him to develop more egalitarian attitudes towards women in the workplace.

Exposure-based explanations, in contrast, argue that individuals will develop more egalitarian gender role attitudes if they are exposed to situations and ideas that support egalitarianism. Similarly, they may develop less egalitarian attitudes if they are exposed to situations and ideas that support separate spheres (Bolzendahl and Myers 2004; Davis 2007). Socialization plays an important role in exposure-based approaches, and is one explanation for why experiences in the natal household as a child – such as parents' division of household responsibilities – play such a strong role in gender attitudes formation (Davis 2007). At the same time, as young people encounter new ideas and situations through personal experiences in school or the workplace, these experiences may influence their gender role attitudes (Fan and Marini 2000; Bolzendahl and Myers 2004; Davis 2007). Education, for example, is widely associated with more egalitarian gender attitudes (Thornton, Alwin, and Camburn 1983; Fan and Marini 2000; Bolzendahl and Myers 2004; Cunningham et al. 2005; Berrington et al. 2008). A recent cross-national study from Europe also found that exposure to female colleagues and supervisors at work is also associated with more egalitarian family role attitudes among men (Meuleman, Kraaykamp, and Verbakel 2016). Other perspectives argue that individuals may adapt their gender role attitudes to conform to the reality of their new situations. For example, a woman who decides to leave the labor force to stay home with children may develop more traditional gender role attitudes, such that these attitudes accord more closely with her life situation (Berrington et al. 2008; Davis and Greenstein 2009).

2.2 Life course theory and the reciprocal relationship between transitions and attitudes formation

Our analysis is based on life course theory, which posits that individuals progress through age-differentiated roles that imply fulfilling different social functions and responsibilities (Elder 1977). The period of transition from child roles to adult roles – the transition to adulthood – is a time of life during which individuals in modern societies are increasingly expected to complete several key events that move them into different social roles. These may include leaving education, entering the labor market, marriage and childbearing. Disruption of the completion of these events, or their completion earlier or later than is the social norm, can have a profound impact on young people's development (Hogan and Astone 1986; Shanahan 2000). Even when youth complete life transitions within what is considered a socially normative timeframe, theories of gender role attitudes formation suggest that the fact of undergoing the transition may expose them to new forms of socialization or lead them to develop new interests that influence their gender role attitudes. This may be particularly true for events, such as marriage, that are imbued with gendered role expectations (Vespa 2009).

The life course perspective has provided the theoretical framework for a number of studies that have demonstrated how experiences during the transition to adulthood may alter individuals' gender roles attitudes (Fan and Marini 2000; Cunningham et al. 2005; Davis 2007; Vespa 2009; Kim and Cheung 2015). Life course theory is particularly useful for such analyses because it provides a framework for analyzing both the effect of attitudes on behavior (*selection effect*) and the effect of life experiences on attitudinal change (*adaptation effect*) (Berrington et al. 2008). This theorization also highlights a key empirical challenge in studying gender role attitude change: the simultaneity of gender role attitudes formation and the likelihood that youth will pass through certain transitions, and the timing of those transitions. For example, having more egalitarian gender role attitudes may increase a young woman's likelihood of working, while experience in the workplace may in turn cause her to develop more egalitarian attitudes.

In order to address this simultaneity issue, studies of the relationship between gender role attitudes formation and life course transitions have exploited panel data to examine the impact of gender role attitudes in one period on transitions during a later period, and vice versa. One transition on which the literature has focused is women's entry into the labor market. Corrigan and Konrad (2007) argue that as women's labor force participation (LFP) has become increasingly common in Western contexts and a wider range of labor market options are open to women (i.e. as structural constraints to women's LFP have lessened), a woman's individual attitudes towards gender roles are likely to have more influence on whether or not she works. In the United States, women with more egalitarian attitudes have consistently been found to be more likely to enter the labor force (Thornton, Alwin, and Camburn 1983; Vella 1994; Farré and Vella 2013; Cunningham et al. 2005), and to work more hours and have higher hourly wages (Corrigan and Konrad 2007). Although no such effect has been found for men's own labor force participation (Fan and Marini 2000; Cunningham et al. 2005; Corrigan and Konrad 2007), men with more egalitarian attitudes as young people are more likely to have wives who work years later (Farré and Vella 2013).

The reciprocal impact of employment on women's gender role attitudes appears to be more dependent on the stage of the life course during which she works. Whereas some studies find that work does lead women to develop more egalitarian attitudes (Tallichet and Willits 1986; Corrigan and Konrad 2007), this may only be the case during later stages in the transition to adulthood (Cunningham et al. 2005) or when women work after marriage (Thornton, Alwin, and Camburn 1983). However, the fact that most of the literature on women's employment and gender role attitudes formation is from the United States is a major shortcoming. In South Korea, Kim and Cheung (2015) find that employment does not lead to more egalitarian attitudes among women, which they attribute to the difficulty women face in combining work and family, continued expectations for traditional family roles, and women's poor long-term career prospects.

Entry into marriage and parenthood are other transitions that have been frequently examined in the literature on gender role attitudes, with mixed results. In the United States, a shift towards more traditional gender role attitudes has been associated with both marriage and entry into parenthood (Davis 2007) only parenthood (Corrigan and Konrad 2007) and neither (Cunningham et al. 2005). This variation in findings may have to do with subgroup differences. Fan and Marini (2000) find that marriage leads to more traditional attitudes among women who marry younger, but not those who marry older, and has no impact among men, whereas entry into parenthood is associated with more traditional attitudes among both sexes. Vespa (2009) finds that marriage is associated with more egalitarian attitudes among African Americans, but less egalitarian attitudes among whites.

Literature on the interactions between gender role attitudes and family formation from outside the United States is again scarce, but also suggests important interrelationships between transitions and sociodemographic characteristics. Among young British women who entered motherhood, those who reduced their work hours developed less egalitarian attitudes, whereas those who continued with the same work hours did not (Berrington et al. 2008). In Germany, young women with more egalitarian attitudes were more likely to live alone or cohabit as opposed to marrying, and non-traditional living situations also reinforced more egalitarian views (Moors 2003). In South Korea, both marriage and entry into motherhood led to the development of more traditional gender role attitudes among women (Kim and Cheung 2015). To the best of our knowledge, none of this literature on change in youth gender role attitudes over the transition to adulthood examines low- or middle-income countries, and only one study (Kim and Cheung 2015) examines a non-Western context. In addition, much of the literature is based on nonrepresentative samples, which is

particularly problematic given the evidence that the relationship between transitions and attitude change may be different for different subpopulations.

2.3 The transition to adulthood in MENA

Countries in MENA are transitioning into a ‘post-welfare’ life course, in which young people’s transitions out of education and into employment and family formation are progressively less defined by state institutions (Dhillon, Yousef, and Dyer 2009). Educational attainment has risen rapidly in the region over the past several decades, including in Egypt, where the gender gap in educational attainment has also narrowed substantially among young people. As of 2014, 27% of young men and 21% of young women aged 25-29 had completed a university education, and an additional 50% of men and 42% of women in the same age group had completed a secondary or two-year tertiary degree (Krafft 2015). The majority of young people in the country thus exit school in their late teens or early twenties. Successful transition from education to the labor market, however, is a major challenge facing young people in Egypt today. Under- and unemployment are significant problems, and have been argued to be at least in part a product of mismatch between young peoples’ employment aspirations, which are heavily oriented towards the public sector¹, and the realities of the increasingly privatized labor market (Assaad 2008; Barsoum 2014).

The transition from education to work also has important implications for young people’s entry into marriage, which remains the sole accepted pathway into adult status and parenthood in Egyptian society (Salem 2015). The cost of marriage in Egypt is high, as young people are expected to separate from their natal household upon marriage and enter a union having a fully equipped, independent home. The bulk of the cost of setting up this home falls on the groom, placing substantial pressure on young men to obtain employment, which also demonstrates marriageability (Singerman 2007). The high cost of marriage, coupled with the difficult labor market situation facing young people in Egypt, has thus contributed to broad social concern in Egypt that marriage among young people is increasingly delayed, and that rates of celibacy are rising (Singerman 2007; Salem 2015). Nevertheless, marriage remains nearly universal in Egypt and average ages at first marriage have not change much in the past decades; nearly 90% of women aged 24-29 were married in 2012, and over 50% of young men. Rates of never-marriage fall to near zero by age 40-44 for both sexes (Salem 2015).

The challenges that Egyptian youth face in transitioning from education to employment manifest quite differently for young men and young women. For young men, early entry into the job market, and obtaining a good quality job, are important predictors of earlier entry into marriage (Assaad, Binzel, and Gadallah 2010). However, the financial pressures of marriage and supporting a household may lead young men to accept less desired jobs (Assaad 2008). Women, in contrast, have very low labor force participation rates in Egypt and do not face the same pressures that men do to demonstrate financial stability as a condition for marriage. Among nonstudent women aged 15-35 in 2014, only 19% were in the labor force, and the unemployment rate was 46%² (Roushdy and Selwaness 2015). Although more educated women are more likely to work than their less educated counterparts, labor force participation rates have been falling among educated women (Assaad and El Hamidi 2009) as well as among more educated female youth (Roushdy and

¹ The Egyptian government guaranteed public sector jobs to all graduates of university and vocational secondary education up until the early 1990s. Although this policy is now defunct, it continues to have a heavy influence the employment aspirations of young people. Public sector jobs are also still widely seen as the most appropriate for young women, and desirable in a marriage candidate.

² This figure includes the discouraged unemployed who were not actively searching for a job at the time of the survey but wanted to work.

Selwaness 2015). This decline has been spurred by the contraction of public employment in Egypt; women still face considerable social and structural barriers to employment in the private sector, and many prefer to stay home rather than accept undesirable jobs (Barsoum 2004; Assaad and Arntz 2005; Assaad 2007).

Despite the substantial literature devoted to the transition to adulthood in MENA, to the best of our knowledge none of this literature has linked transitions from education, to employment and marriage to the formation of gender role attitudes among young people. This is an important gap in our understanding of stalled transitions to adulthood in MENA given the international evidence that gender role attitudes both influence transitions and in turn may be altered by youth's experiences. The limited literature on youth gender role attitudes in Egypt has demonstrated that these attitudes are highly conservative, with both young men and women expressing high levels of support for separate spheres in intrahousehold decision making as well as women's roles in the public sphere (Mensch et al. 2003; Population Council 2010; Salemi and Rashed 2015). Analyzing the dynamics of youth gender role attitudes over the transition to adulthood, particularly given the low rate of labor force participation among young women, is therefore important for our understanding of broader social trends.

3. Data and Methods

3.1 Data

This study relies on data from the 2009 and 2014 Panel Survey of Young People in Egypt (SYPE), which was conducted by the Population Council. The 2009 SYPE generated a unique source of data on the situation of youth in Egypt, consisting of a nationally representative sample of 15,029 young people aged 10 to 29 from 11,372 households. The wide age range encompassed by the survey allows us to track young people throughout the complete duration of their transition to adulthood (Population Council 2010). In 2014, a second round of the survey successfully tracked 10,916 (72.6%) of those young individuals, now aged 13 – 35.³ Almost 60.0% of the individuals interviewed in 2009 were relocated in the same household in 2014, whereas 12.6% of the 2009 sample was found in split households (the remaining 27% attrited).⁴ Weights based on the probability of non-response were constructed to adjust the 2014 SYPE sample for attrition (Roushdy and Sieverding 2015).

Together, SYPE 2009 and 2014 yield a panel dataset that is nationally representative for both time periods, and is the most comprehensive source of data on young people in Egypt today. The SYPE covers a wide range of topics related to the transition to adulthood, including education, employment, migration, family formation, health, and critically for this study, gender role attitudes. As the gender role attitudes questions were only asked of youth who were aged 15 or older in 2009, our analyses are restricted to this age group, a sample of 6,199 young people.

3.2 Measurement of gender role attitudes

To operationalize the concept of gender role attitudes, we use variables constructed from different opinion statements in the SYPE survey. The two rounds of the SYPE asked both male and female

³ Data collection for SYPE 2014 started in late 2013 and continued until mid-2014. So, respondents should be age 14-34 during the second SYPE interview. However, it appears that some respondents were below age 10 or above age 29 during the 2009 interview, but misreported (or approximated) their age. This often occurs at the boundaries of the eligible age group in household surveys. In the SYPE 2014 data, the age is left as reported during the 2013/ 2014 interview without any adjustment, after carefully checking respondents' exact age.

⁴ A split household is defined in the 2014 SYPE panel as a household that was formed due to the move of at least one eligible young person out of his or her original 2009 household to form a new household after the 2009 interview.

youth several statements that measured their attitudes towards gender equality in education, employment, and household roles and domestic work. All items were transformed into binary variables (1=agree/strongly agree, 0 = neutral/disagree/strongly disagree). A common index that reflects the conservatism of gender role attitudes in general was constructed using principal component factor analysis of the full set of six binary variables. In order to reflect different domains of gender roles separately, two additional indices were then constructed. These indices reflect attitudes towards (1) women's role in the public sphere (education, employment, and sexual harassment, which proxies for mobility in the street), and (2) decision making and authority within the household (see Appendix Table A1). All the indices were constructed twice, one based on the sample of young women for analyses that pertain only to women, and one for the combined sex sample. In all cases, an increase in the index score indicates more conservative gender role attitudes.

For analyses in which our outcome is attitudes, the outcome variable is constructed as change in attitudes between 2009 and 2014. Factor analysis was applied to the pooled sample to maintain the loading and the coefficient of each variable across the two rounds and accurately measure the difference (see Appendix Tables A2 and A3). When estimating the causal effect of an event on the change of an outcome from baseline, we may face the regression-to-the-mean phenomenon, where the baseline outcome will usually be negatively correlated with the change (Allison 1990), i.e. individuals with highly conservative scores will tend to have lower scores at the second-time point. Whether or not to adjust for the baseline outcome is debated in the literature (Allison 1990; Clarke 2004; Barnett, Pols, and Dobson 2005). Allison (1990) suggested using the difference in the outcomes across the two time points without adjusting for the baseline outcome as an independent variable. Clarke (2004) justified using the simple difference in an observational study as an outcome without adjusting for the baseline value, as long as the suspected confounders and the history before the baseline are adjusted for. In our analysis, we control for the background characteristics and any suspected confounders, therefore the simple difference in the outcome is used without adjusting for the baseline outcome, particularly because our main objective is to observe the effect of an event on change in attitudes.

3.3 Transitions

We examine two aspects of the transition to adulthood. First, we examine the transition to labor force participation among young women. In this analysis, we consider only women who were out of the labor force in 2009, and who were not studying in 2014, as those who are studying are likely out of the labor force due to their schooling and we therefore do not have information about their interest in labor force participation. We consider women who were either working during the seven days prior to the 2014 interview or were unemployed but actively searching for a job and available to work during that period as in the labor force. Hence, the variable takes the value 1 if the young woman switched from out of the labor force to in the labor force between 2009 and 2014. We do not examine male labor force participation, since we do not expect gender role attitudes to influence men's employment given the pressures young men face to establish economic independence.

Second, we examine the transition to marriage and parenthood for both young women and young men using the sample of youth who were aged at least 15 in 2009. This transition is measured through a categorical variable with five categories, which are transformed into dummy variables for the multivariate analyses. The categories are: (1) never married in both 2009 and 2014 (reference category), (2) was married and had children before 2009, (3) was married before 2009,

but only had children between 2009 and 2014 (transition to parenthood only), (4) married between 2009 and 2014 but did not have children (transition to marriage only), (5) married between 2009 and 2014 and had children (transition to both marriage and parenthood).

3.4 Econometric modeling

To estimate the effect of attitudes on transitions, a probit specification is used to model the likelihood of young women's entry into the labor force following the 2009 survey. A hazard model is used to estimate the transition to marriage.⁵ To avoid the above mentioned possible simultaneity between young people's attitudes and outcomes, in both models we regress youth outcomes observed in SYPE 2014 on lagged youth characteristics from the 2009 survey. The effect of young people's transitions on their gender role attitudes is then modeled using OLS, as all the outcomes are continuous indices. In order to avoid simultaneity in these analyses, we estimate the impact of transitions occurring between 2009 and 2014 on attitudes in 2014.

In all models, we control for respondents' individual characteristics, including age in 2014 and its square, whether the individual was the eldest sibling in their natal household, and education level in 2014 measured in three categories (below secondary education (reference), secondary education, and post-secondary education or above). When modeling young women's transition to the labor force between 2009 and 2014, we include a dummy variable indicating whether she ever worked prior to 2009 (the sample is restricted to those who were not currently working in 2009). We also control for family formation transitions during the 2009 and 2014, as previous literature on FLFP in Egypt demonstrates that marriage is often a barrier to labor force participation among women. When modeling the impact of attitudes on the transition to marriage and family formation, we likewise include labor force status in 2009 for both genders based on previous literature.

In the models predicting the impact of attitudes on transitions, we also control for characteristics related to the natal household, as we expect these to impact attitudes more strongly prior to the transitions. These include father education, and mother education (for the transition to marriage model) or mother employment (for the transition to labor force model, as mother's employment is more likely to predict daughters' employment). It was not possible to include mothers' education and employment in the same model due to the high degree of collinearity between these variables. In all models, we also control for wealth of the respondent's current household, which is measured through wealth quintiles derived from a household asset index (the poorest quintile is the reference category).

Finally, although we make use of the panel nature of the SYPE data to get around the potential simultaneity of gender role attitudes formation and completing life transitions, we are aware that omitted variable bias may still affect the model specification. For instance, local attitudes may become increasingly conservative as the result of an exogenous shock, causing a woman not to enter the labor force and at the same time to develop more conservative attitudes. In this case, it is not that not entering the labor force caused an increase in the woman's own conservatism, but that the increasing conservatism in the local community attitudes that caused both. Failing to account for this possible omitted variable bias would lead to an overestimation of the effect of labor force participation on attitudes. In order to minimize the effect of this omitted variable bias, in addition to the household characteristics mentioned above, in all models we control for governorate and rural/urban status or region of residence.

⁵ It was not possible to estimate the hazard model using all categories of transition to marriage and parenthood, so the model is reduced to the transition to marriage only.

4. Results

4.1 Overall change in gender role attitudes 2009 – 2014

Table 1 illustrates the overall conservatism of young people's gender role attitudes. In terms of women's roles in the public sphere, the majority of youth agreed that men should have priority in employment and that women who dress provocatively deserve to be harassed, although attitudes on these two items became somewhat more egalitarian between the survey waves. In contrast, less than 30% of youth believed that educating boys is more important than girls during both years, indicating greater acceptance of gender equality in the area of education, although opinions on this item became slightly more conservative between the survey waves.

Young people's attitudes regarding household decision-making and authority also changed little across the two survey waves. The majority of youth agreed that a girl must to obey her brother even if he is younger, and that a woman should obtain her husband's permission before doing anything. About half agreed that the husband alone should make decisions about spending household money. Yet Figure 1 shows that, using the index that combines youth responses in both domains, the change in the public spheres items was enough that gender role attitudes overall became slightly less conservative during the 2009 to 2014 period, as indicated by the shift in the curve to the left.

4.2 Young women's transition to labor force participation

The results of the probit estimations for the effect of gender role attitudes on young women's transition to the labor force are presented in Table 2. The first column shows the impact of the public sphere index and the second column the household roles index. The results indicate that, regardless of the measure used, young women's gender role attitudes have a significant effect on their future labor force participation. More specifically, young women who had more conservative attitudes in 2009 were less likely to enter the labor force between 2009 and 2014. The covariates confirm expected predictors of young women's likelihood of entering the labor force, namely that higher educational attainment – and particularly tertiary education – predict labor force participation, as does having worked prior to 2009. Consistent with the literature, transitioning to marriage and/or parenthood also made young women less likely to enter the labor force. Having a mother who was out of the labor force predicts lower likelihood of young women entering the labor force, as does being in the middle and fourth wealth quintiles, holding another factors constant.

Turning to the impact of the transition to the labor force on young women's gender role attitudes, the results in the first two columns of Table 3 indicate that this transition does not have the expected effect on attitudes. Entering the labor force led to more conservative attitudes on both the public sphere and household roles indices for young women, although only the latter result was significant, and marginally so. In other words, although more egalitarian gender attitudes increase the likelihood of young women joining the labor force, once young women have actually entered the labor force this seems to lead to more conservative attitudes with regards to household decision-making in particular.

4.3 The transition to marriage and parenthood

Figures 2A and 2B show change in the combined gender role attitudes index for young women and men, respectively, by their transition into marriage and parenthood. These descriptive results suggest that gender role attitudes became more egalitarian among young women for whom neither marital nor childbearing status changed during the period under study (unmarried and childless

throughout, or married with children throughout), and those who got married in 2014 but did not have children. Attitudes also appear to have become more egalitarian among those who were married in 2009 and remained childless through 2014, but this group is very small in size. In contrast, little shift is seen among those women who got married and had children between the two survey waves, and those who were already married in 2009 and had kids by 2014 (i.e those who transitioned to parenthood). Among young men, we see a slight shift towards more egalitarian attitudes across most transition statuses, including those who both married and had children. The shift is somewhat less noticeable, however, among young men who were already married in 2009 and transitioned to parenthood between the two surveys. The sample of young men who were already married in 2009 but remained childless in 2014 was too small to produce reliable results.

Table 4 show the hazard estimates of the impact of gender role attitudes in 2009 on youths' transition to marriage and parenthood, again using the two domain-specific indices. The results show that there was no significant effect of either of the gender role attitudes indices on young people's likelihood of transitioning to marriage, whether for men or women. The covariates in the model generally conformed to expectation, with age predicting greater likelihood of transition among men, and higher education (which is likely collinear with age) for women. Being in the labor force in 2009 increased men's likelihood of making family formation transitions, whereas it decreased women's likelihood.

Finally, returning to Table 3 we see the effect of making family formation transitions between 2009 and 2014 on gender role attitudes in 2014 for young women and men. For young women (columns 1 and 2), parenthood appeared to be the main predictor of attitudinal change, as those who got married and had kids, were already married but had kids, and were married with kids throughout the period all became significantly more conservative on the public sphere index. In addition, the apparent egalitarian shift seen in the descriptive analysis among those groups of women who were or got married but did not have children did not hold up in the multivariate analysis; no significant change was seen among these groups and the sign on the coefficients is positive.

Among young men (Table 3, columns 3 and 4), the apparent egalitarian shift seen in the figure also disappeared once controlling for individual and household characteristics. The group who was already married in 2009 and transitioned to parenthood by 2014 showed significantly more conservative attitudes on the public sphere index, as with young women. Among those men who were married with children prior to 2009, in contrast, attitudes became more conservative on the household roles index. Young men who were married prior to 2009 and remained childless through 2014 became more conservative on both indices, but again this group was too small to consider the results reliable.

5. Discussion and Conclusions

Change in gender role attitudes is an unexplored dimension of the transition to adulthood in Egypt, despite evidence that young people's attitudes are highly conservative across a range of domains. In this paper we examine how young people's attitudes towards women's roles in the public sphere and the gender dynamics of decision-making in household change over two key transitions identified in the international literature: the transition to marriage and family formation, and young women's transition to labor force participation.

Our findings regarding young women's transition to the labor force are partially consistent with the international literature, which is heavily based on the United States. As with studies from the

U.S. (Vella 1994; Cunningham et al. 2005; Farré and Vella 2013), we find that young women with more egalitarian gender role attitudes are more likely to enter the labor force. This finding held regardless of the measure of gender role attitudes used.

On the other hand, contrary to the bulk of the literature from the U.S. (Tallichet and Willits 1986; Cunningham et al. 2005; Corrigan and Konrad 2007), entering the labor market does not in turn appear to have a liberalizing effect on young women's gender role attitudes in Egypt. In contrast, entering the labor force actually appears to make young women somewhat more conservative, particularly with regards to household gender roles. This finding is more consistent with those of Kim and Cheung in South Korea (2015), who attribute the lack of association between women's employment and egalitarian attitudes to the continued expectation of traditional family roles and difficulty that women face in combining work and family in the South Korean context. The literature from Egypt also indicates that combining work and family is a key challenge for women, who continue to carry the primary burden of housework and childcare even when they work (Assaad and El Hamidi 2009; Sieverding 2012; Hendy 2015). Similar factors may thus explain the lack of a liberalizing effect of work on attitudes in the Egyptian context. Furthermore, the expectation among young people that women will privilege their roles as wives and mothers (Hassan and Sieverding forthcoming) may lead to something of a counter-acting attitudinal effect among young women who work. In other words, women may compensate for the fact that they work outside the home, which may be seen as negatively affecting their roles as wives and mothers, by developing more conservative attitudes regarding decision-making and authority within the household.

Our results broadly agree with the international literature finding that entry into marriage and parenthood is associated with increasing conservatism in gender role attitudes. (Davis 2007; Corrigan and Konrad 2007; Berrington et al. 2008; Kim and Cheung 2015). Among young women in Egypt, increasing conservatism appears to be associated in particular with the transition into parenthood. Interestingly, women's attitudes also consistently became more conservative with regards to women's role in the public sphere, suggesting that as women themselves take on the role of wife and mother they may become more disapproving of behaviors (e.g. working outside the home) that may be seen to contrast with those roles. The results for young men were more mixed, which may reflect the fact that young men were already more conservative in their gender role attitudes.

This paper makes several key contributions to the literature on change in gender role attitudes over the transition to adulthood. Building on the recent study by Kim and Cheung (2015), our findings reinforce the importance of context to the relationship between transitions and attitudinal change, particularly as relates to women's employment. The expectation that work will lead to more liberal attitudes among young women clearly does not hold across non-Western contexts, which has important implications for future trends in women's labor force participation. Growing egalitarianism in attitudes about women and work accompanied increasing rates of women's employment in Western contexts (Bolzendahl and Myers 2004; Fortin 2005), a mutually reinforcing dynamic that may not apply in the context of Egypt. Second, we show distinct effects of young people's life course transitions on different domains of gender role attitudes. These relationships suggest that young people's behaviors in the public or household domain may impact their attitudes on the other, which does not conform entirely with interest- or exposure-based arguments about attitudinal change. Rather, this finding suggests that there may be dynamics of adjustment between exposure to new situations and conformity to broader social norms, which

agrees most closely with the theoretical perspective that adaptation of gender role attitudes may occur in order to reconcile attitudes to an individual's new life situation.

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Figure 1: Change in Youth Gender Role Attitudes from 2009–2014

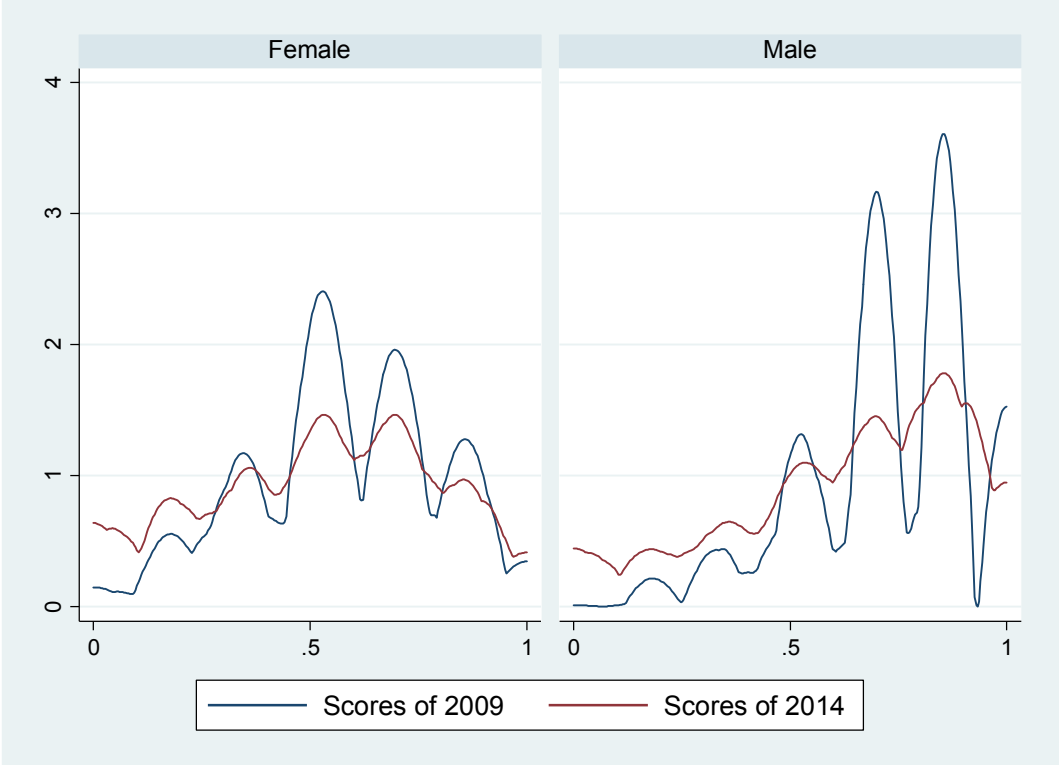


Figure 2A and 2B: Change in Gender Role Attitudes Among Female (Top Panel) and Male (Bottom Panel) Youth Aged 15-29 In 2009, by Transition to Marriage and Parenthood Status in 2014

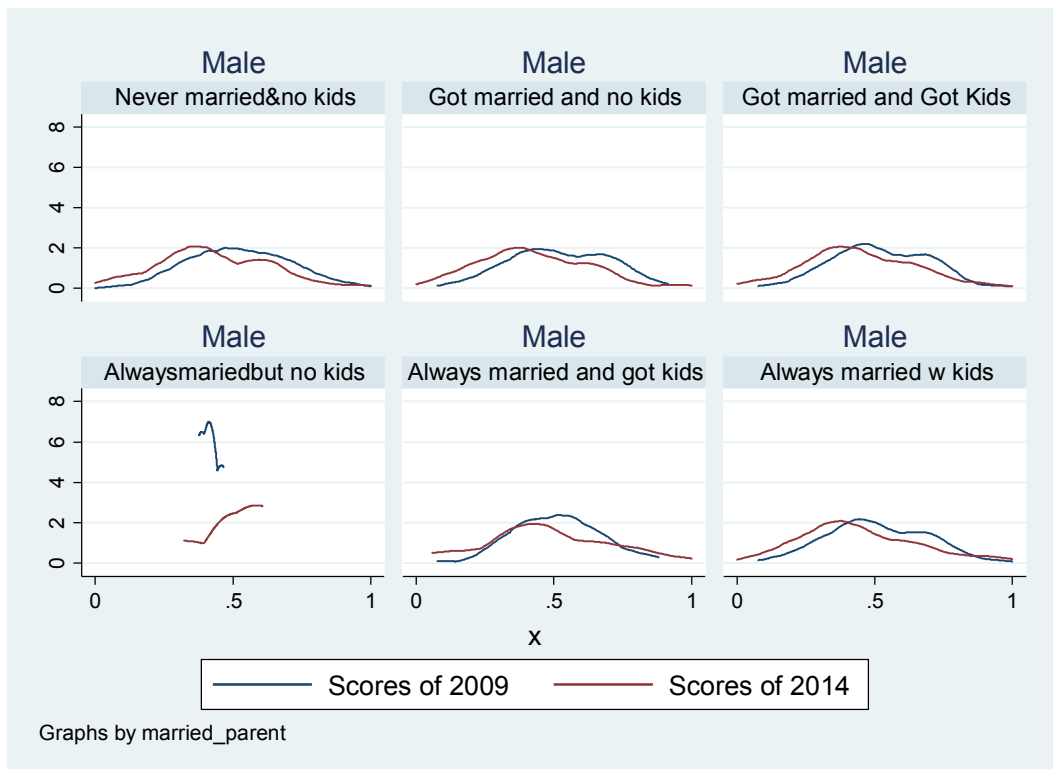
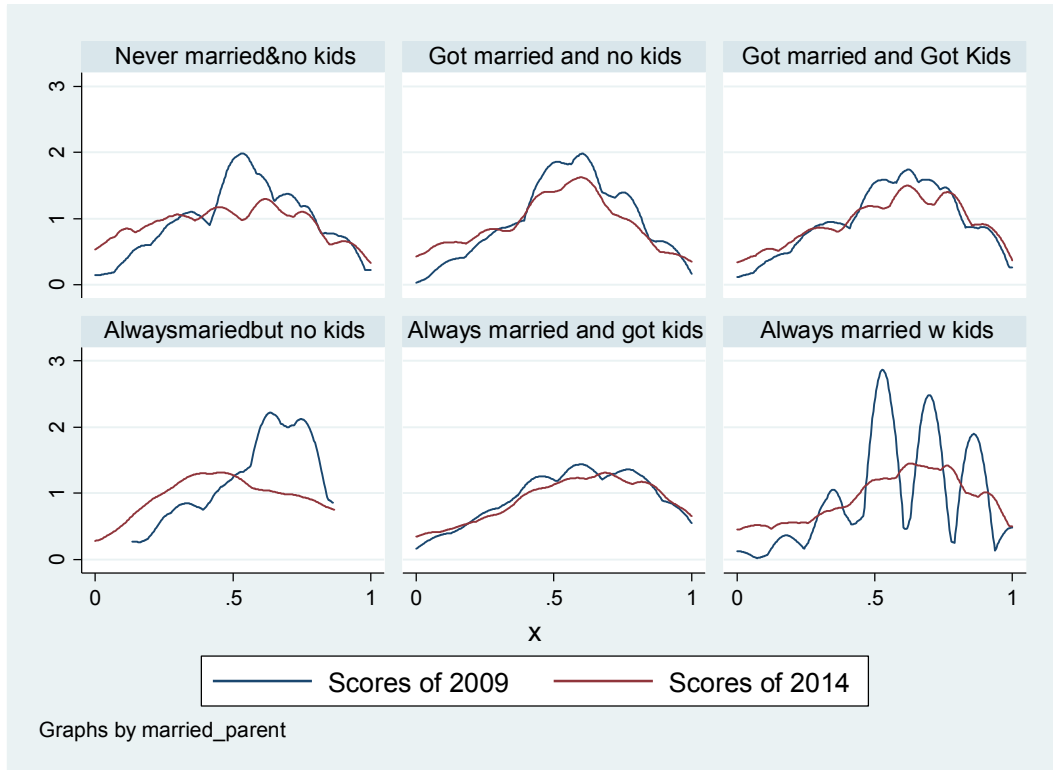


Table 1: Change in Youth Gender Role Attitudes from 2009 – 2014

	2009		2014		Difference 2009 – 2014
	Mean	SD	Mean	SD	
Gender roles in the public sphere					
Education	0.241	0.428	0.281	0.450	-0.040
Employment	0.875	0.330	0.612	0.487	0.263
Harassment	0.779	0.415	0.596	0.491	0.183
Household decision making and authority					
Obey brother	0.606	0.489	0.615	0.487	-0.009
Husband decide	0.495	0.500	0.473	0.499	0.022
Permission	0.818	0.386	0.770	0.421	0.048

Table 2: Probit Estimates of the Effect of Gender Role Attitudes on Future Labor Force Participation Among Young Women

	(1) LF Participation	(2) LF Participation
Public sphere attitudes index, 2009	-0.0557* (0.0316)	
Household roles attitudes index, 2009		-0.0464* (0.0275)
Eldest	0.0223 (0.0179)	0.0225 (0.0178)
Age in 2014	0.0455* (0.0244)	0.0436* (0.0243)
Age in 2014 squared	-0.000743* (0.000444)	-0.000706 (0.000443)
Secondary education	0.0735*** (0.0200)	0.0721*** (0.0198)
Tertiary education	0.260*** (0.0428)	0.254*** (0.0421)
Employed prior to 2009	0.144*** (0.0497)	0.150*** (0.0506)
Marital status, got married without kids	-0.0973*** (0.0183)	-0.0978*** (0.0181)
Marital status, got married and had kids	-0.136*** (0.0151)	-0.136*** (0.0151)
Marital status, always married and had kids	-0.113*** (0.0159)	-0.112*** (0.0162)
Marital status, always married with kids	-0.143*** (0.0236)	-0.144*** (0.0237)
Mother out of labor force	-0.117*** (0.0315)	-0.117*** (0.0317)
Father secondary education	-0.000895 (0.0266)	-0.00222 (0.0266)
Father tertiary education	-0.00273 (0.0306)	-0.00253 (0.0305)
Second wealth quintile	-0.0446* (0.0235)	-0.0448* (0.0235)
Middle wealth quintile	-0.0561*** (0.0205)	-0.0564*** (0.0204)
Fourth wealth quintile	-0.0677*** (0.0217)	-0.0667*** (0.0218)
Richest wealth quintile	-0.0372 (0.0268)	-0.0387 (0.0265)
Region controls	NO	NO
Governorate controls	YES	YES
Observations	2,658	2,658

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Effect of Transitions on Young People's Gender Role Attitudes in 2014

	Women		Men	
	(1) Public sphere	(2) Household roles	(3) Public sphere	(4) Household roles
Entered labor force, 2009-2014	0.0253 (0.0247)	0.0465* (0.0274)		
Marital status, got married without kids	0.0365 (0.0373)	-0.00309 (0.0445)	0.00269 (0.0337)	0.0192 (0.0355)
Marital status, got married and had kids	0.0506* (0.0274)	0.0432 (0.0343)	0.0353 (0.0258)	0.0340 (0.0327)
Marital status, always married but no kids	0.0336 (0.112)	-0.0191 (0.104)	0.397** (0.163)	0.412*** (0.138)
Marital status, always married and had kids	0.0917** (0.0427)	0.0430 (0.0519)	0.157*** (0.0525)	0.0881 (0.0685)
Marital status, always married with kids	0.0575* (0.0323)	0.0293 (0.0363)	0.0281 (0.0375)	0.0955*** (0.0366)
Employed, 2014			-0.0281 (0.0263)	0.0185 (0.0261)
Unemployed, 2014			0.0182 (0.0352)	0.0588 (0.0397)
Eldest	0.00867 (0.0186)	0.0112 (0.0234)	-0.00868 (0.0180)	0.0106 (0.0196)
Age in 2014	-0.00122 (0.0246)	0.0120 (0.0263)	0.00201 (0.0285)	0.00642 (0.0323)
Age in 2014 squared	-6.06e-05 (0.000453)	-0.000333 (0.000485)	-2.77e-05 (0.000546)	-0.000192 (0.000624)
Secondary education	-0.0480** (0.0205)	0.0225 (0.0246)	-0.0600** (0.0237)	-0.0114 (0.0251)
Tertiary education	-0.0594* (0.0333)	0.0635* (0.0378)	-0.0844*** (0.0275)	-0.0226 (0.0306)
Second wealth quintile	-0.00214 (0.0234)	0.0158 (0.0305)	-0.0400 (0.0297)	-0.0448 (0.0311)
Middle wealth quintile	0.0112 (0.0298)	0.0291 (0.0334)	-0.00165 (0.0314)	-0.000866 (0.0338)
Fourth wealth quintile	0.0333 (0.0291)	0.0744* (0.0384)	-0.00426 (0.0294)	-0.0143 (0.0334)
Richest wealth quintile	-0.0500 (0.0312)	-0.0129 (0.0381)	-0.0139 (0.0318)	0.0176 (0.0340)
Constant	0.131 (0.328)	-0.0975 (0.345)	0.00986 (0.358)	-0.00703 (0.404)
Region controls	NO	NO	NO	NO
Governorate controls	YES	YES	YES	YES
Observations	2,687	2,687	2,725	2,725
R-squared	0.094	0.093	0.100	0.112

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Hazard Estimates of The Impact of Gender Role Attitudes in 2009 on Youths' Transition to Marriage by 2014

	(1) Men	(2) Women
Public sphere attitudes index, 2009	-0.00758 (0.0924)	-0.0133 (0.0445)
Household roles attitudes index, 2009	-0.0131 (0.0179)	-0.00819 (0.0124)
Age in 2014	0.392*** (0.0468)	0.0191 (0.0218)
Secondary education	-0.0341 (0.222)	0.445*** (0.165)
Tertiary education	-0.125 (0.295)	1.105*** (0.314)
In the labor force 2009	1.757*** (0.307)	-0.908*** (0.196)
Mother high education	-0.0237 (0.0405)	-0.0537* (0.0306)
Father high education	-0.0475 (0.0317)	0.0224 (0.0228)
Second wealth quintile	0.217 (0.242)	-0.275* (0.149)
Middle wealth quintile	0.0710 (0.230)	-0.248 (0.157)
Fourth wealth quintile	0.365 (0.244)	-0.00828 (0.157)
Richest wealth quintile	0.0138 (0.277)	-0.0902 (0.178)
Wife battery index	0.0549 (0.0780)	0.0928* (0.0532)
med_male_marr_09	-0.107** (0.0444)	-0.112*** (0.0350)
area_all_att_09	0.536 (1.160)	-0.330 (0.726)
d1	-1.923*** (0.416)	0.796 (0.510)
d2	-1.135*** (0.344)	1.212*** (0.423)
d3	-0.378 (0.276)	1.333*** (0.345)
d4	0.445** (0.213)	1.507*** (0.288)
d5	0.473** (0.192)	1.075*** (0.280)
Constant	-9.656*** (1.506)	-0.641 (1.182)
ln-varg(constant)	0.967*** (0.223)	-1.466 (2.182)
Region controls	YES	YES
Governorate controls	NO	NO
Observations (years)	7,883	4,272
e(gammav) (p_value)	7.03e-11	0.318

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Appendix

Table A1: Statements Measuring Attitudes Towards Gender Roles and Domestic Violence

Gender roles in the public sphere	
Stat1	Educating boys is more important than educating girls
Stat2	When job opportunities are scarce, priority must go to men over women
Stat3	Women who are harassed in the streets deserve this if they are dressed provocatively
Household dynamics and decision making	
Stat4	A girl must obey her brother, even if he is younger
Stat5	Only the husband should decide how household money is spent
Stat6	A woman must obtain permission from her spouse before doing anything

Table A2: Loadings and Coefficients of Constructed Factors, Young Women Only Sample

	Common factors		Separate factors	
	Loadings	Coefficients	Loadings	Coefficients
Gender roles in the public sphere				
Stat1	0.278	0.104	0.560	0.418
Stat2	0.373	0.140	0.802	0.599
Stat3	0.269	0.101	0.619	0.462
Household dynamics and decision making				
Stat4	0.333	0.125	0.715	0.469
Stat5	0.306	0.115	0.729	0.478
Stat6	0.352	0.132	0.694	0.455

Table A3: Loadings and Coefficients of Constructed Factors, Full Sample

	Common factors		Separate factors		
	Loadings	Coefficients	Loadings	Coefficients	
Gender roles in the public sphere					
Stat1		0.317	0.117	0.588	0.428
Stat2		0.449	0.165	0.791	0.576
Stat3		0.346	0.127	0.634	0.461
Household dynamics and decision making					
Stat4		0.413	0.152	0.718	0.456
Stat5		0.426	0.157	0.724	0.460
Stat6		0.428	0.158	0.731	0.464