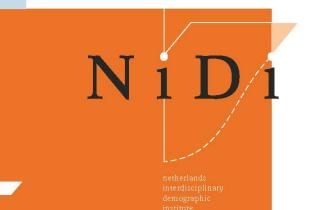Kim Caarls and Helga de Valk

Relational Trajectories and Living Arrangements among Ghanaians: The Role of International Migration

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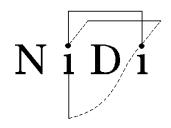Migration

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Abstract: Despite the linked nature of life events the existing literature mainly analyses union formation, living arrangements and international migration separately. In this paper we study the inter-linkage between Ghanaian couples' relational trajectories and international migration taking a dynamic approach. Data come from MAFE-Ghana survey (n=868) and capture unique retrospective life histories of Ghanaians between age 21-35 (migrants and non-migrants), enabling us to analyse relationship histories and their development over time in a context of international migration while taking the socio-cultural practice of multi-local residence into account. We applied sequence analyses to describe trajectories and optimal matching to identify clusters of typical trajectories. Using multinomial logit models, we investigated the association between migration and one of the four identified relationship paths. We found a wide variety of ways in which relationships and living arrangements evolve. Although both migrants and non-migrants practice non-residential relationships, it is most common among migrants, and migrant women in particular.

Keywords (6): relational trajectories, international migration, Ghana, sequence analysis, optimal matching, life course research

Introduction

Migration patterns between Africa and Europe have intensified over the last decades. While a large body of research has addressed the socio-economic consequences of migration for individuals (e.g. De Haas, 2006; Maimbo & Ratha, 2005; Orozco, 2002; Portes et al., 2002), the outcomes for family life remain yet to be fully understood. International migration flows have resulted in living arrangements whereby couples live geographically separated across borders. These couples have been conceptualised as transnational families, who maintain "a sense of collective welfare and unity, namely 'familyhood', even across national borders" (Bryceson & Vuorela, 2002, p. 3). Although these couples received increasing scholarly attention and their significance has been recognised by previous studies (e.g., Bryceson & Vuorela, 2002; König & De Regt, 2010; Mazzucato, 2013), still little is known on how these couples are formed and how their unions evolve over time. Furthermore, most studies focus on transnational couples only, ignoring the relevant comparison to the group of couples without a migration experience. When we want to understand better the transnational unions it is crucial to include in particular also those without a migration experience to point to similarities and differences between these couples.

Since the 2000s, transnational family studies have contributed to our understanding of migrants' family life by offering rich and detailed ethnographic accounts of couples arranging their lives across borders (e.g. Charsley, 2005; Gallo, 2006; George, 2000; Hirsch, 2003). Yet, most scholars examined transnational couples only, leaving questions about the prevalence, the different forms and development of these unions unanswered (Clark, Glick & Bures, 2009; Mazzucato & Schans, 2011). To understand migrants' relationship trajectories (i.e. how relationships form, transform or dissolve), we also need to take living arrangements into account (i.e. whether or not spouses are living together). While migrants' relationship status is often narrowly classified as either single or married, both categories do not fully capture unions and this holds especially for international migrants. Not only unmarried unions but specifically, non-residential relationships need to be included, as couples need not always share a home (Antoine et al., 2009). How living arrangements may vary as a consequence of migration, or how these living arrangements might be shaped by the context at the origin or destination country remains still unclear.

The emerging body of literature on international migration and family life typically focuses on migratory flows between Latin America or Asia and the US (e.g. Constable, 2003; Frank & Wildsmith, 2005; Hill, 2004; Landale & Ogena, 1995). In Europe, studies on migrants still predominantly focus on the integration of the 'guest worker' generation (Glick, 2010). Yet, 'new' migrant groups, mostly those who migrated between Sub-Saharan Africa and Europe, remain largely understudied despite their increasing numerical significance. Studying African migrants can be beneficial for our understanding of familial relations in the context of international migration as these migrants typically come from origins where norms around living arrangements are very different from those in the countries where guest workers traditionally migrated from (e.g. Turkey). Particularly, norms about spouses living geographically separated are common in many Sub-Saharan African countries, which is not the case in other parts of the world including Europe.

In this paper, we investigate the inter-linkage between relationship histories and the role of international migration by comparing Ghanaians with and without migration experience. We contribute to the literature by providing insight into the prevalence and variations of transnational couples, concentrating on patterns of relationship formation, transformation or dissolution among Ghanaians in young adulthood (from age 21 to 35). Additionally, we question whether there are differences between men and women, specifically, recognizing the gendered nature of migration experiences (e.g. Gallo, 2006; Hill, 2004; Jolly & Reeves, 2005). We examine whether the effect of migration differs for men and women, and to what extent it matters which partner in the couple migrates.

The Ghanaian case is particularly interesting for studying the effect of migration on relational trajectories. First, the Ghanaian case allows us to unravel the relationship between the effects of existing socio-cultural practices in the country of origin (i.e. spouses practicing multi-local residence) on the one hand, and the effect of international migration on the other hand. Previous studies (e.g. Mazzucato & Schans, 2011; Caarls et al., *in press*) have argued that transnational relationships are not necessarily problematic for migrants from Ghana, considering that this may be a continuation of their previous lifestyle of living-apart-together. Or for those that did not experience this practice first-hand, they are part of a culture where norms about living arrangements

include multi-local residence. Second, Ghana has a long history of both internal and international migration (Anarfi et al., 2003; Reed et al., 2010; Twum-Baah, 2005). Third, Ghanaian migration has traditionally included substantial shares of women. This specific feature enables an exploration of how relationship histories and migration evolve differently across life for men and women.

In order to capture the manifold ways in which couples' relational trajectories can be affected by international migration, we need full information on the relational trajectories of both migrants and non-migrants. So far this data was scarcely available and only recently the unique Migration between Africa and Europe (MAFE) Ghana survey data allow carrying out this type of analyses. Using a biographic life history survey, this paper uses data from the MAFE-Ghana project, which sampled current migrants in Europe, and returnees and non-migrants in Ghana. We adopt a life course approach to explicitly deal with the sequencing and timing of events and how these are related to changes in context (Elder, 1985; Kulu & Milewski, 2007). While the majority of migration studies concentrate on a specific point in time, this approach that explicitly deals with the dynamic nature of migrants' life is needed to fully comprehend migrants' (family) behaviours (Wingens et al., 2011).

International Migration and Family Behaviours

Several 'partly complementary, partly contradictory hypotheses' about the effect of international migration on family behaviours prevail (Kulu, 2005). While these hypotheses are mainly drawn from studies on migration and fertility (Anderson, 2004; Kulu, 2005; Milewski, 2007), several scholars have studied the relationship between migration and the likelihood of entering a union, the timing of union formation, or the probability of union dissolution (e.g. Frank & Wildsmith, 2005; Jampaklay, 2006; Landale, 1994; Ortiz, 1996). When comparing migrants to non-migrants, the *socialisation hypothesis* states that current family behaviours are shaped by the norms and behaviours the person encountered during the early socialisation period, meaning that migrants and non-migrants exhibit similar family patterns as they were part of a similar socialisation process. Contrary, the *selection hypothesis* starts from the assumption that migrants differ on specific (unobserved) characteristics from non-migrants, which in turn determines their family behaviours after migration. This implies

that family behaviours can be either delayed or accelerated. Family behaviours of migrants can also differ from non-migrants as a consequence of migration, in line with the *disruption hypothesis* that argues that migration implicates a disruption in the social and physical context, which causes family behaviours to be delayed and take place at later ages among migrants compared to non-migrants. At the same time, studies on the timing of union formation in relation to migration have also found that migration can accelerate union and family formation (Jampaklay, 2006; Landale, 1994; Ortiz, 1996). This is mainly explained by the higher incomes that are often generated by migrants, providing them with more financial resources, making them more attractive on the marriage market (Jampaklay, 2006).

The observed links between migration and family behaviour is also suggested to be the case for union dissolution. Migration, as a stressful life event, can strain relationships to the extent that they result in divorce but few studies have actually investigated the role of international migration on divorce (Glick, 2010). Some existing studies show that migration increases the risk of union dissolution (Boyle et al., 2008; Landale & Ogena, 1995; Hill, 2004) while others did not find this relationship. Frank & Wildsmith (2005) for example found that Mexican couples in which the men migrated, were not necessarily at a higher risk of union dissolution compared to couples without migration experience. They reported that only extensive migration between the US and Mexico resulted in higher probabilities of union dissolution. A previous study on Ghanaians showed that it matters which of the partners migrates: the probability of divorce is found to be larger for Ghanaian couples where the wife migrated independently, but not for couples where the husband migrated independently (Caarls & Mazzucato, 2015).

In any case it is clear from the literature that union formation (or dissolution) and migration are interrelated events (Hill, 2004; Mulder & Wagner, 1993). Most work however has addressed only the occurrence and not the interrelatedness, the latter being the aim of this paper. If migration has a disruptive effect, individuals with migration experience are likely to form unions at later ages compared to individuals without migration experience. If migration accelerates the formation of unions, individuals with migration experience are expected to experience union formation at earlier ages compared to individuals without migration experience.

Relationships and Migration in Ghana

Union formation processes are likely to be influenced by the specific socio-cultural practices in the country someone grew up in. In Ghana, as in many Sub-Saharan African countries, multi-local residence practices are frequent (Clark, 1994; Coe, 2011; Fortes, 1950; Manuh, 1999; Meekers, 1992; Oppong, 1970). Consequently, couples do not necessarily co-reside, and spouses typically each live with his or her own family, stressing the importance of lineage ties over conjugal bonds (Clark, 1994; Manuh, 1999; Oppong, 1970). This practice of non-residential relationships is not necessarily something of the past. Even today, many couples continue to live apart together (LAT) in Ghana (Beauchemin et al., 2015; Coe, 2011, 2014).[1] The occurrence of married household heads that are not living with their partner are estimated to between 31% (Demographic and Health Survey (DHS), 2008) and 41% (Beauchemin et al., 2015) in the Ghanaian case.

In addition to this practice in the country itself, an emerging body of literature is addressing the phenomenon of couples living apart together *across* borders (LATAB), often referred to as transnational couples. Existing studies, using qualitative research methods, have shown that maintaining a relationship across borders takes effort of both the migrant and the left-behind spouse (Gallo, 2006; Hondagneu-Sotelo, 1994; Pribilsky, 2004). Although transnational relationships are predominantly considered as problematic, or as second-best options, some scholars do stress that couples can manage long-distance separations quite well and for long durations (Kanaiaupuni, 2000; Landolt & Wei Da, 2005; Pribilsky, 2004).

More recent studies of transnational couples using a more quantitative research approach in which general patterns can be better observed, all noted that LATAB could be a long-term arrangement, particularly for West Africans (González-Ferrer, 2011; Baizan et al., 2014; Beauchemin et al., 2015). In addition, not all transnational couples desire to reunify (Landolt & Wei Da, 2005; Caarls & Mazzucato, 2015). Similarly, when assessing the probability of reunification, among Ghanaian migrants to the UK and the Netherlands, no significant differences were found between men and women (Caarls & Mazzucato, 2015). This points to the prevailing social-cultural practices in the origin context that might make West Africans more inclined to endure long-term relationships across borders than migrants coming from countries where this is less

common. We therefore expect that living apart arrangements are common among Ghanaians and for migrants and non-migrants alike.

When considering conjugal life in Ghana, it is important to take gender norms, which shape the context in which these relationships take place, into account. Studies have pointed out the independence of Ghanaian women, from both matrilineal and patrilineal lineages (Manuh, 1999; Oppong, 1970). Women that work outside the households are no exception in Ghana. The combination of this independence and the common practice of multi-local residence have resulted in relationships that are not necessarily egalitarian, but that can be characterized by a great degree of autonomy of both spouses (Coe, 2011; Takyi & Broughton, 2006; Takyi & Gyimah, 2007; Oppong, 1970). This autonomy of both partners shapes a context in which geographical separation is not only frequently practiced, but also not necessarily problematic.

In addition to this context of union formation, Ghana is also characterized by substantial internal and international migration. Although both migration streams are significant we focus on international migration here. While Ghana became a net-emigration country from the 1960s onwards, migration flows notably increased since the 1980s (Anarfi et al., 2003). Ever since, migration to Europe and North America continued to expand, with Ghanaians becoming part of the so-called 'new African diasporas' in the 1990s (Koser, 2003). While reliable numbers are lacking, Twum-Baah (2005) estimated that approximately 1.5 million Ghanaians lived overseas in 2003. Consequently, many Ghanaian families are transnational and almost half of the Ghanaian urban households have a household member residing overseas (Caarls et al., *in press*). Ghanaian migrants are extensively practicing their transnational lives through monetary and social remittances, as well as through investments at origin (Orozco, 2005).

The reputedly greater independence of Ghanaian women, compared to women from more patriarchal neighbouring countries (Oppong, 1970), the feminization of the Ghanaian migration flow (Anarfi et al., 2003), and the different family outcomes depending on which partner migrates (Caarls & Mazzucato, 2015), makes it relevant to study the role of gender in shaping relational trajectories in the context of Ghanaian migration.

Relational Trajectories: a Life Course Approach

The life course approach has been applied extensively in family sociology including studies on union and family formation and the transition to adulthood more in general. Scholars have acknowledged the importance of studying transitions and experiences in the life course, not only as separate events but also as a sequence of events that evolve over life. The latter allows for a better understanding how lives evolve, recognizing that events in the life course are linked, influenced by significant others, and taking place in a specific historical, geographical and institutional context (Billari & Piccarreta, 2005; Elder, 1985; Giele & Elder, 1998; Kohli, 2007; Mayer, 2000; Wingens et al., 2011).

Although the link with migration decisions seems obvious, the life course approach has been applied rather scarcely in migration studies. Most migration studies focus on one specific point in time, such as the situation of migrants after migration. Additionally, migration studies are to a large extent dominated by studies on migrant integration, dealing with migrants' socio-economic situation in the host society. Yet understanding migrants' behaviours, which are embedded in and shaped by societal structures, necessitates an approach that explicitly deals with the dynamic nature of human life (Kulu & Milewski, 2007; Wingens et al., 2011).

Also for the current study, where we aim to link migration, relationship trajectories and living arrangements, a more integrated view on the linkages between these choices seems useful. In addition to revealing the dynamic nature of relationships, by examining the relational trajectories and living arrangements of Ghanaians during their young adulthood, we explore the role of international migration on these trajectories.

Data and Methods

Recent data from the MAFE-Ghana survey carried out in 2009-2010 among Ghanaians in Ghana, the United Kingdom (UK), and the Netherlands provide the data for our study. This survey collected retrospective information on different life domains, such as housing, education, migration, and marital status on an annual basis. Respondents between the ages of 25 and 75 years old, who were born in Ghana, were sampled. Current migrants were interviewed in the Netherlands and the UK, and non-migrants, migrant spouses and returnees were interviewed in Ghana. The collection of the data

took place in the urban areas both in Ghana (Accra and Kumasi) and in Europe (Amsterdam, The Hague, and Almere for the Netherlands, and London for the UK). In Ghana, 1,246 respondents were surveyed, and 273 and 149 migrants in the Netherlands the UK, respectively. The pooled dataset thus includes 1,665 respondents (for more details about the data collection procedures, see Beauchemin, 2012; Schoumaker & Diagne, 2010).

Analytical Sample

To study relational trajectories for Ghanaians with and without international migration experience, we analyse the relationship histories of the individual between the ages of 21 and 35 years. Retrospective information was used to capture transitions that were reported on a yearly basis. Since for sequence analyses that we apply here to describe and analyse relational trajectories, all sequences must be complete and of equal length (Robette & Thibault, 2008), meaning that not all individuals could be included.

The age bracket between 21 and 35 captures Ghanaians in their young adulthood. Secondary data on demographic behaviour show that in these years most Ghanaians enter their first marriage (on average 21.1 years for females and 25.4 years for males (Ghana Statistical Service (GSS), Ghana Health Service (GHS) and ICF Macro, 2009)). We take the 35 year upper age limit as we expect both migration and relational trajectories to differ substantially after age 35. At age 35, the likelihood of different previous relations, partners and children increases, and this may have a different implications for migration decisions than is the case for those who are making these transitions to adulthood for the first time. Based on these considerations we restricted our sample to respondents for whom we had information about the 15-year period (between ages 21 and 35).

Polygamous couples, couples that ended through the death of the spouse, and couples whereby the spouse was the only one in the couple that migrated (i.e. the respondent did not experience migration) within our observation period, were excluded because the size of these groups was insufficient to enable specific analysis. This means that from our initial sample of 1,107 respondents with a sequence length of 15, we had to drop 239 (21.6 per cent) individuals. In total, 46 (4.2 per cent) respondents were involved in a polygamous relationship, 114 (10.3 per cent) widowed respondents, and

83 (7.5 per cent) couples whereby the partner migrated and the respondent did not experience migration. These restrictions resulted in a total sample size of 886 respondents that are analysed here.

Estimation Strategy

To examine relational trajectories over time, we applied sequence analysis (Abbott & Tsay, 2000; Robette & Thibault, 2008). A trajectory is an ordered list of states, and states refer to values of a categorical variable that describe a status of an individual, or a couple, at a given point in time. This categorical variable can take a finite set of possible values. In this paper, we studied relational trajectories and identified 6 possible states our respondents could experience in the course of the 15-year period of observation.

The analyses consisted of several parts: first, we described the relational trajectories of Ghanaian couples, exploring which trajectories were most prevalent. Second, we applied Optimal Matching (OM) to identify clusters of most similar trajectories (Abbott & Tsay, 2000). Similarity in OM is calculated by considering the 'costs' of matching sequences. We opted for a cost matrix that is based on the transition rates (for more details, see e.g. Abbott & Tsay, 2000; Anyadike-Danes & McVicar, 2010; Brzinsky-Fay & Kohler, 2010; Robette & Thibault, 2008). Transition rates refer to the probability to move from one state to another, between each couple of states (e.g. the probability to move from S to UT, from S to MT, or from MT to S).

We applied the Partitioning Around Medoids (PAM) algorithm to identify clusters, and we carried out a visual inspection of the clusters, combined with reported Average Silhouette Width (ASW), to decide for the optimal number of clusters (Kaufman & Rousseeuw, 1990; Kleinepier et al., 2015). The "TraMineR" and "WeightedCluster" packages in R were used for the calculations (Gabadinho et al., 2011; Studer, 2013).

After identifying the optimal number of clusters based on the criteria stated above, we used these clusters to examine whether they differed between migrants and non-migrants as well as men and women by analyses the distribution over clusters. Finally, we applied multinomial logit modelling, with the clusters derived from OM as the dependent variable to estimate which factors are associated with which typology

(for a similar approach, see e.g. Elzinga & Liefbroer, 2007; Kleinepier et al., 2015; Schumacher, Matthijs & Moreels, 2013).

Measures of Variables

In order to analyse relational trajectories, we combined two variables. The first variable annually measures **relationship status** distinguishing four possible states: single, in an unmarried union, in a married union, and separated (either through separation or divorce). We used self-defined measures of marital status; 'married' can imply customary, religious, and civil marriages, or a combination of these. Similarly, separation and divorce are also self-reported. The second variable captures a couples' **living arrangement**, annually, i.e. whether the spouses live in the same household or not. Integrating these two variables resulted in six different states, which will serve as input for our sequential analyses: 1) being single (S), 2) being in a union and living together (UT), 3) being in a union and living apart (UA), 4) being married and living together (MT), 5) being married and living apart (MA), and 6) being out of a relationship (D).

Our main variable of interest is the **migration experience** measure in two ways. First, we used a dichotomous variable that captures whether or not the respondent migrated internationally at any time between ages 21 and 35. We only include long stays, i.e. a stay abroad that lasted for at least one year. We have information on all international moves and the year they occurred allowing for a distinction not only of the occurrence but also the ordering of events, which is crucial for our sequence analyses. Second, we used a categorical variable capturing the migration in the couple : 0 = *no migration*, 1 = *only male migration*, 2 = *only female migration,* 3 = *both male and female migration.* For the few respondents that have remained single from 21 to 35 years, this variable refers to the person (sex).

Additionally, we controlled for several socio-demographic and socio-economic variables that are known to influence relationships and living arrangements in Ghana (see e.g. Amoateng & Heaton, 1989; Awusabo-Asare, 1988; Reed et al., 2010; Takyi, 2001; Takyi & Gyimah, 2007). First, we take into account the respondents' **sex** (1 = *men,* 2 = *women*). The **educational level** of the respondent was included by measuring the highest level attained at age 35, with 1 = *no schooling/primary level*, 2 = *secondary*

level, and 3 = *tertiary level*. We further included the total **number of children** the respondent had at age 35 (range 0 – 8), and whether or not the respondent belongs to the matrilineal lineage group **Akan** (0 = *no,* 1 = *yes*). Respondent's birth **cohort** was distinguished in 3 categories: 1 = *<=1950,* 2 = *between 1951 and 1960*, and 3 = *>=1961*.

      Subjective wealth status captured retrospective information about the subjective wealth-status of the respondent for each year. It is difficult to reliably capture respondents' objective income with a retrospective survey; therefore, we use the respondents' replies concerning their subjective wealth-status. The following question was asked: '*Would you say that during this period you had enough to live on?*' This resulted in three response categories, 1 = *yes absolutely,* 2 = *it depended*, and 3 = *not at all.* For our multinomial analyses, we recorded the number of years that the respondent indicated to be *absolutely satisfied* between ages 21 and 35*,* creating a continuous variable where higher scores indicate more periods of being financially satisfied. In a similar vein, we created the variable **economically active**, which refers to the number of years the respondent was *economically active*.

      To further examine the role of gender, and to study also the gendered nature of migration, we included an **interaction term between gender** and **migration experience.** In Table 1, an overview of these independent variables for our analytical sample is presented, for the full sample as well as for those with and without migration experience separately.

<< Table 1 about here >>

Findings

We first examined the prevalence of living apart together in our sample, and distinguished between migrants and non-migrants. Table 2 shows that among Ghanaians in their young adulthood, remaining single is uncommon for both migrants and non-migrants (seven per cent and five per cent respectively). Additionally, living apart together in Ghana is very common among non-migrants (62 per cent), which is in line with the historical-anthological literature suggesting the prevalence of this phenomenon (e.g. Clark, 1994; Coe, 2011; Manuh, 1999; Oppong, 1970). Of all

migrants, 37 per cent lived apart together in response to migration. For 20 per cent, living apart together was a continuation of previous arrangements. Among migrants, 32 per cent either migrated jointly, or formed a couple while abroad.

<< Table 2 about here >>

Using respondents' retrospective information for a 15-year period, starting from when they were 21 years old, we measured transitions on a yearly basis. Since each trajectory consists of 15 states, this implies that we could theoretically identify 6^{15} different trajectories. We identified 480 different sequences in our sample, and 384 (44 per cent) are distinct sequences. Next, we examined the diversity of states in our sample at each given age. We compare these transversal state distributions between migrants and non-migrants, men and women, and a combination of migration experience and gender.

We examined the sequencing of states by looking at the most common trajectories for migrants and non-migrants (results not shown, available upon request from the first author). Both migrants and non-migrants moved most often from a single status to a non-residential marriage, although this trajectory occurred more frequently among migrants (S-MA, 25.4 per cent for migrants and 18.8 per cent for non-migrants). The second most popular trajectory for non-migrants was to already be married and living apart at age 21, and remaining so at least until age 35 (MA, 15.8 per cent). Migrants on the other hand were more likely to move from being single to a co-residential marriage and then to a non-residential marriage (S-MT-MA, 23.2 per cent). This indicates that migrants on average entered into marriage at a later age compared to non-migrants. It also shows that for a large share of migrants, a co-residential marriage was followed by a non-residential marriage. This pattern occurred among non-migrants too, although to a much lesser extent (15.2 per cent). The prevalence of non-residential marriages among migrants and non-migrants alike exemplifies that this type of arrangement is not necessarily the outcome of international migration. In terms of the 10 most common trajectories, migrants were also more often engaged in unmarried unions: 17.3 per cent compared to 11.4 per cent for non-migrants.

Figure 1 shows the distribution of states for migrants and non-migrants between ages 21 and 35. First, we find that the share of singles at age 21 is a little over 50 per

cent for both groups. Second, those with a migration experience are more often in an unmarried union compared to their non-migrant counterparts. Non-migrants are more frequently in a married union. Non-residential marriages appear to be a significant relationship type for both migrants and non-migrants. Migrants have more often experienced separation (either through divorce or separation from unmarried union) than their non-migrant counterparts.

<< Figure 1 about here >>

In Figure 2, we examined transversal state distributions for men and women separately to discern gender differences. In line with previous studies (GSS, GHS and ICF Macro, 2009; World Bank, 2008), we note that men are not only more often single at age 21 but also that they more often remain single. This indicates that men enter marriage at later ages than their female counterparts and are also more likely to have not entered a union. Finally, LAT relationships are more common among women than men.

<< Figure 2 about here >>

To examine the interplay between migration and gender, we plotted the state distributions for migrant and non-migrant men and women in Figure 3. While men are more often single than women (see Figure 2), this seems to be particularly the case for non-migrant men. Migrant men are more often in an unmarried union compared to non-migrant men. Non-migrant men on the other hand, are more likely to be involved in co-residential marriages than migrant men. Similarly, non-migrant women are more frequently in co-residential marriages than migrant women. In line with Figure 1, we see that migrant both men and women are more often divorced or separated. Being married and living apart is much more common for women, but for migrant women in particular.

<< Figure 3 about here >>

Finally, we explored to what extent it matters who of the partners in the couple migrates. In line with the previous findings, we find that most singles are found among independent male migration (Figure 4). Independent female migration is more often associated with divorce or separation. While living apart together is frequent in general, it does seem that independent female migration and joint migration more often resulted in this living arrangement.

<< Figure 4 about here >>

We applied optimal matching techniques to explore which relational trajectories are most similar. We identified four clusters (ASW 0.43) that represent different types of relational trajectories for young Ghanaian adults (Figure 5). The first cluster refers to young adults that follow a trajectory that is predominated by co-residential marriages that came about in their early 20s. We labelled this cluster of trajectories "co-residential marriages", and 25 per cent of Ghanaians in our sample belonged to this type. A second cluster of relational trajectory is composed of Ghanaians that are mostly single until age 35, or those who entered relationships later in life (mostly in their early 30s). We refer to this group as "singles", representing 18 per cent of our sample.

The third cluster is the most heterogeneous, capturing trajectories that are characterized by unmarried unions, as well as relationships that are characterized by separation, either through separation from an unmarried union or divorce. 20 per cent of our sample belongs to this cluster, which we labelled "mixed trajectories". Finally, in the fourth cluster we distinguished trajectories with non-residential marriages, which we also labelled this way. Almost all respondents in this cluster experienced non-residential marriages, and some did so over the entire period of observation. In total 37 per cent of our sample belongs to this category making it the most common type.

<< Figure 5 about here >>

Using the four-cluster solution from OM as the dependent variable, we estimated multinomial logit models, taking the cluster *co-residential marriages* as the reference category, to examine which factors are associated with which type of trajectories (Table

3). The coefficients on the explanatory variables should be interpreted as the likelihood of belonging to that cluster vis-à-vis the cluster *co-residential marriages.* First, we compare the likelihood of being part of a cluster predominated by singlehood to the cluster of co-residential marriages in Models 1. Our key variable of interest, whether or not the respondent experienced migration during the ages 21 to 35, is not significantly related with singlehood. Additionally, the likelihood of being single does not significantly differ between men and women. In Model 1C, we tested whether the effect of migration differed for men and women by including an interaction effect of migration experience and sex, but this also yielded no significant results. Finally, we compared who migrated in Model 1D. In line with the previous two models, no significant results were found regarding independent male or female migration. However, a significant effect was found for those where both spouses have migrated. This result should be treated with caution, as it likely reflects the fact that a few respondents in the Singles cluster did experience a short period in which they were in a couple (see also Figure 5).

Migrants are more likely to be in mixed trajectories compared to co-residential marriages, and this effect remains after controlling for the other characteristics (Models 2). There are no significant differences between men and women, as shown by the insignificant result of the interaction between migration experience and sex. Additionally, the variable capturing whom in the couple migrated (i.e. the variable 'migration experience by sex') revealed significant results for all couples with migration experience compared to non-migrants, irrespective of who in the couple had migration experience. In Models 3, we examined the probability of being in the cluster non-residential marriages versus co-residential marriages. Being a migrant increases the likelihood of being in a non-residential marriage (Model 2A and 2B), although the interaction effect shows that this only holds for female migrants (Model 2C). Yet, considering which spouse migrated, Model 2D shows that the likelihood of being in a non-residential marriage is greater for couples that have experienced independent male migration, or where both spouses migrated.

As for our control variables, we found that educational attainment is not differentiating between any of the clusters. Larger family size is negatively related to the singles- and the mixed-cluster, but it is positively related to the non-residential marriage type. We also estimated the effects of having no children compared having at

least one child (results not shown). The same significant effects were found, but since we found clear evidence of a linear relationship between the number of children and the respective clusters, we decided to use the latter variable instead of the dichotomous variable that records whether or not having children matters. Although previous scholars indicated that being part of matrilineal descent groups increases the probability of divorce, we did not find an effect of matriliny (i.e. Akan) for any of the clusters. We find that respondents from older birth cohorts (born before 1950) are more likely to be part of the singles-cluster but no cohort effects were found for the other clusters. Subjective wealth status is negatively related to all three clusters, meaning that compared to those in a co-residential marriage, all others are more likely to have experienced periods where they were unhappy with their financial situation. Singles and those with non-residential marriages are also more likely to have experienced periods of unemployment.

<< Table 3 about here >>

Conclusion and Discussion

In this paper, we studied relational trajectories of Ghanaians in young adulthood. We concentrated on relational histories, and how these developed over time. Considering the socio-cultural practice of multi-local residence in Ghana and Ghanaians' (international) mobility, we looked at relationship status (i.e. respondents' marital status) and living arrangements (i.e. whether or not spouses are living together) simultaneously. The aim of this paper was to gain insight in the inter-linkage between Ghanaian couples' relational trajectories and international migration. Our contribution to the literature is twofold: first, we contribute to migration studies that typically study one aspect of migrants' behaviour at a specific point in time. We however explored Ghanaian relationships over time using a dynamic life course perspective (Wingens et al., 2011). Second, we contextualize our study of relational trajectories by taking the practice of non-residential relationships into account. Our work purposefully links this practice at origin to migration by comparing Ghanaians with and without international migration experience. Additionally, we explored the role of gender on these trajectories, considering the gendered nature of both migration and relationship histories (e.g. Gallo, 2006; Hill, 2004; Jolly & Reeves, 2005).

First of all we found that relational trajectories of Ghanaian couples are very diverse. This indicates that just looking at the relationship at one point in time is not sufficient to understand how relationships evolve over time and how they might differ for migrant and non-migrants. This also relates to our finding that that non-residential unions, both married and unmarried, are commonplace irrespective of migration experience, exemplifying that this type of arrangement is not necessarily brought on by international migration as is sometimes suggested. The frequent changes between co-residential to non-residential marriage as found in our sequence analyses is illustrative of a high mobility of Ghanaians, both in terms of internal moves and international migration (Anarfi et al., 2003; Reed et al., 2010; Twum-Baah, 2005).

The complexity is relationship trajectories is reflected in the four typical clusters we found and that captured the wide diversity in a more simplified way: 1) co-residential marriages, 2) singles, 3) mixed trajectories, and 4) non-residential marriages. These clusters do point to the fact that there is a group of couples who are mainly in a co-residential marriage and a group in which non-residential marriage dominates. The latter refers to the largest share of our study sample. At the same the mixed trajectories-cluster is the most heterogeneous, capturing mainly unmarried unions and respondents that were divorced or separated. Our multinomial logistic regression on the factors associated with the four types of relational trajectories did not show a correlation between being in the cluster that is predominated by singlehood and having experience with international migration. Yet migrants are more likely to be found in the cluster of non-residential marriages. We found that this holds in particular for women with a migration experience. Female migration is a significant phenomenon in Ghana, with around half of all migrants being women (Anarfi et al., 2003). Additionally, there are a high number of female-headed households in Ghana, already since the 1970s (Manuh, 1997; Takyi, 2001; Takyi & Gyimah, 2007). The increase in female-headed households has been attributed to the high degree of autonomy of Ghanaian women, the high mobility of Ghanaian men, both internally and internationally, large-scale economic restructuring programs, such as the Structural Adjustment Programs (SAPs), an increase in divorces, and pre-marital childbearing (Coe, 2011; Manuh, 1999; Mikell, 1992, 1997; Oppong, 1970). Non-residential marriages might also be the outcome of migration, considering the fact that having a spouse abroad can provide more financial stability.

Furthermore we found that having a migration experience is also positively associated with the mixed-trajectories cluster. Two types of relational trajectories are central in this cluster: trajectories characterized by divorce and trajectories characterized by unmarried unions. Although information about union instability and divorce prevalence in Ghana is scarce, several studies have pointed to high divorce rates in general (Takyi & Gyimah, 2007; Tabutin & Schoumaker, 2004). Additionally, migrants are, under certain conditions, more likely to experience divorce or separation, either due to more unstable relationships as a consequence of international migration or because they migrate to escape unhappy marriages (e.g. Andersson & Scott, 2010; Caarls & Mazzucato, 2015; Frank & Wildsmith, 2005; Hill, 2004; Landale & Ogena, 1995). Compared to the other clusters, the mixed cluster captures relatively the most unmarried unions. Corroborating previous studies, migration experience is also associated with a greater likelihood of being in an unmarried union (e.g. Landale, 1994), further explaining the fact that migrants are more likely to be in this cluster.

Non-residential marriages are prevalent among all layers of Ghanaian society and it has been practiced historically as well as today (Coe, 2011; Manuh, 1999; Oppong, 1970). Nonetheless, respondents in this cluster are more likely to have experienced more periods of unemployment than those in co-residential marriages. Being part of the singles-cluster is related to belonging to the older age group. Additionally, respondents belonging to this cluster are mostly economically inactive and unsatisfied with their financial situation. Considering this and the fact that they were of marital age when the first economic crisis hit Ghana hard, plausibly made them less attractive in the marriage market, and as such, increased the likelihood of being single.

Our study raises also more questions on the interrelatedness of migration and family formation that should be addressed in future studies. While our small sample size did not allow for carrying out separate analyses for men and women, future research could carry this study further by scrutinizing these differences. Additionally, our aim here was to compare migrants and non-migrants, leading to a limitation in the migration specific characteristics of the individual that we could cover here. It would however be an attractive avenue to investigate whether certain migration characteristics, such as the period of migration, the specific country of destination, and the duration of migration,

shape relational trajectories. In addition to adopting a dynamic perspective to relational trajectories, we incorporated both co-residential and non-residential living arrangements in our study, which advances previous studies that assumed close physical proximity in studying relationships. However, we were not able to simultaneously disentangle between living apart together nationally and internationally. While we opted for the latter, we strongly encourage subsequent studies on this topic to probe the different and similar mechanisms behind living apart together nationally versus internationally.

Admitting these limitations, this study is among the few that examined the linkages between union formation, living arrangements and international migration. The MAFE-Ghana enabled us to do so, by offering detailed retrospective information relationships and living arrangements of migrants and non-migrants. This comparison between migrants and non-migrants showed that international migration shapes relational trajectories to some extent, but it also reveals that some types of living arrangements are related to socio-cultural practices at origin. The latter emphasizes the importance of taking the origin contexts into account when studying processes related to international migration.

Endnotes

[1] We use the terms "LAT relationships" and "non-residential relationships" interchangeably. The practice of "multi-local residence" also refers to this type of relationship.

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Table 1. Overview of independent variables

Variables		Full sample N	%	Non-migrants n	%	Migrants n	%
Migration experience*	No	495	57.0				
	Yes	373	43.0				
Couple migration experience *	No migration	495	57.0	495	100.0	0	0.0
	Male migration	125	14.4	0	0.0	125	33.5
	Female migration	50	5.8	0	0.0	50	13.4
	Male and female migration	198	22.8	0	0.0	198	53.1
Sex	Men	413	47.6	194	39.2	219	58.7
	Women	455	52.4	301	60.8	154	41.3
Highest level of education attained*	<=Secondary	634	73.0	404	81.6	230	61.7
	Tertiary	234	27.0	91	18.4	143	38.3
Akan	No	324	37.3	200	40.4	124	33.2
	Yes	516	59.5	274	55.4	242	64.9
	Missing	28	3.2	21	4.2	7	1.9
Cohort	<=1950	105	12.1	72	14.6	33	8.9
	1951-1960	248	28.6	126	25.4	122	32.7
	>=1961	515	59.3	297	60.0	218	58.4
Survey country	Ghana	620	71.4	466	94.1	154	41.3
	Netherlands	165	19.0	21	4.3	144	38.6
	UK	83	9.6	8	1.6	75	20.1

Continuous variables						
Variable	Range	Mean (s.d.)	Range	Mean (s.d.)	Range	Mean (s.d.)
Number of children*	0-8	2.21 (1.53)	0-8	2.45 (1.55)	0-8	1.89 (1.44)
Subjective wealth status**	0-15	12.29 (3.63)	0-15	12.73 (3.60)	0-15	11.72 (3.60)
Economically active**	0-15	9.33 (6.09)	0-15	8.60 (6.55)	0-15	10.29 (5.28)

Source: MAFE-Ghana data, 2009-2010
*Notes: * Referring to the period of observation, i.e. between 21 - 35 years of age ** Referring to the number of years the respondents has experienced episodes of being satisfied with the financial situation/being economically active.*

Table 2. Number of people who lived apart or not, and whether this is due to migration, by migration status:

Respondents' living arrangements:	Full sample n	%	Non-migrants n	%	Migrants n	%
…always single	53	6.1	34	6.9	19	5.1
…never LAT	273	31.4	153	30.9	120	32.2
…LAT in Ghana only	328	37.8	308	62.2	20	5.4
…LAT only due to migration	138	15.9	0	0.0	138	37.0
…LAT in Ghana & due to migration	76	8.8	0	0.0	76	20.4
Total	*868*	*100.0*	*495*	*100.0*	*373*	*100.0*

Source: MAFE-Ghana data, 2009-2010

Table 3. Multinomial models of the four relational trajectories clusters

Cluster 1: Co-residential marriages (ref.)								

Cluster 2: Singles

	Model 1A		Model 1B		Model 1C		Model 1D	
	RRR	S.E.	RRR	S.E.	RRR	S.E.	RRR	S.E.
Migration experience (No = ref.)	1.251	0.336	0.914	0.277	0.75	0.26		
Migration experience by sex (None = ref.)								
Male migration							1.224	0.454
Female migration							2.166	1.284
Male and female migration							0.351***	0.151
Sex (Male = ref.)			0.798	0.205	0.656	0.208	0.753	0.218
Education (<=secondary = ref.)			1.359	0.377	1.355	0.376	1.395	0.392
Number of children			0.374***	0.041	0.376***	0.041	0.372***	0.041
Akan (No = ref.)			1.07	0.274	1.065	0.274	1.096	0.284
Cohort (<=1950 = ref.)								
1951-1960			0.438**	0.173	0.442**	0.175	0.418**	0.167
>=1961			0.553*	0.201	0.569	0.208	0.552*	0.203
Financially satisfied			0.966*	0.02	0.965*	0.02	0.968	0.02
Economically active			0.924**	0.032	0.922**	0.032	0.922**	0.032
Sex##Migration experience					1.875	1.004		

Cluster 3: Mixed

	Model 2A		Model 2B		Model 2C		Model 2D	
	RRR	S.E.	RRR	S.E.	RRR	S.E.	RRR	S.E.
Migration experience (No = ref.)	2.153***	0.554	2.439***	0.695	2.588***	0.926		
Migration experience by sex (None = ref.)								
Male migration							2.982***	1.091
Female migration							2.537*	1.361
Male and female migration							1.950*	0.697
Sex (Male = ref.)			1.520*	0.35	1.669	0.54	1.633*	0.421
Education (<=secondary = ref.)			1.112	0.297	1.109	0.296	1.124	0.301
Number of children			0.692***	0.06	0.694***	0.06	0.689***	0.06
Akan (No = ref.)			0.691*	0.159	0.697	0.161	0.697	0.160
Cohort (<=1950 = ref.)								
1951-1960			0.638	0.277	0.636	0.276	0.644	0.280
>=1961			1.817	0.721	1.803	0.717	1.822	0.723
Financially satisfied			0.938***	0.017	0.938***	0.017	0.938***	0.017
Economically active			0.996	0.034	0.995	0.035	0.995	0.035
Sex##Migration experience					1.038	0.495		

Cluster 4: Non-residential marriages

	Model 3A		Model 3B		Model 3C		Model 3D	
	RRR	S.E.	RRR	S.E.	RRR	S.E.	RRR	S.E.
Migration experience (No = ref.)	1.632**	0.364	2.095***	0.499	1.382	0.409		
Migration experience by sex (None = ref.)								
Male migration							1.874**	0.620
Female migration							1.488	0.739
Male and female migration							2.594***	0.778
Sex (Male = ref.)			2.204***	0.431	1.525*	0.38	2.188***	0.466
Education (<=secondary = ref.)			0.952	0.221	0.946	0.22	0.941	0.219
Number of children			1.209***	0.083	1.219***	0.084	1.212***	0.084
Akan (No = ref.)			1.028	0.203	1.034	0.204	1.034	0.204
Cohort (<=1950 = ref.)								
1951-1960			0.781	0.25	0.802	0.258	0.759	0.244
>=1961			1	0.305	1.051	0.322	0.977	0.298
Financially satisfied			1.004	0.016	0.951*	0.028	1.003	0.016
Economically active			0.953*	0.028	1.004	0.016	0.953*	0.028
Sex##Migration experience					2.473**	0.999		
Observations	868		840		840		840	
Log likelihood	-1153.759		-964.78377		-961.2676		-952.88102	
DF	9		33		36		39	
Chi2	24.62		326.89		333.93		350.70	
Pseudo R-squared	0.011		0.145		0.148		0.155	

Source: MAFE-Ghana data, 2009-2010; Note: All models controlled for survey country; *** p<0.01, ** p<0.05, * p<0.10
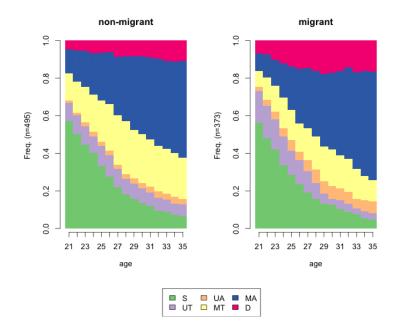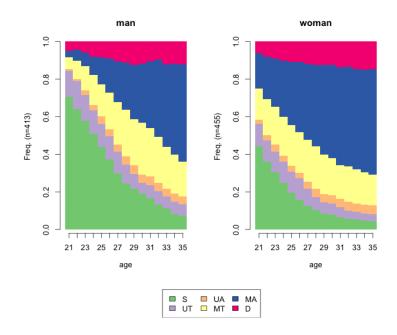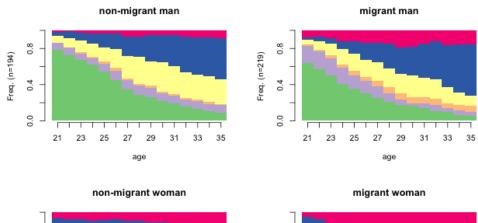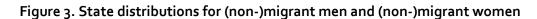
Figure 1. State distributions for migrants and non-migrants

Figure 2. State distributions for men and women

Figure 3. State distributions for (non-)migrant men and (non-)migrant women

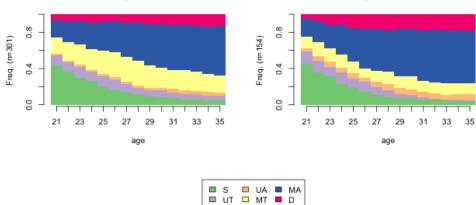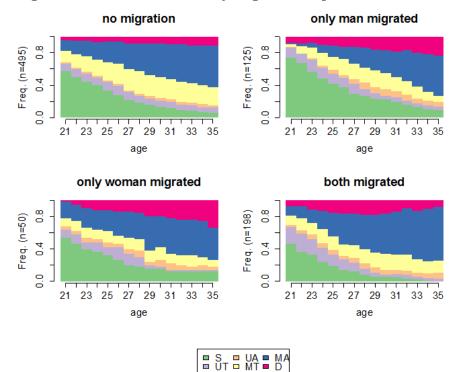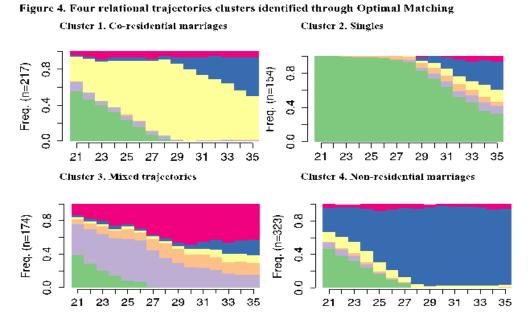**Figure 4. State distributions by migration experience and sex**

Figure 5. Four relational trajectories clusters identified through OM

Figure 4. Four relational trajectories clusters identified through Optimal Matching

Cluster 1. Co-residential marriages

Cluster 2. Singles

Cluster 3. Mixed trajectories

Cluster 4. Non-residential marriages

Source: MAFE-Ghana data, 2009

Despite the linked nature of life events the existing literature mainly analyses union formation, living arrangements and international migration separately. In this paper we study the inter-linkage between Ghanaian couples' relational trajectories and international migration taking a dynamic approach. Data come from MAFE-Ghana survey (n=868) and capture unique retrospective life histories of Ghanaians between age 21-35 (migrants and non-migrants), enabling us to analyse relationship histories and their development over time in a context of international migration while taking the socio-cultural practice of multi-local residence into account. We applied sequence analyses to describe trajectories and optimal matching to identify clusters of typical trajectories. Using multinomial logit models, we investigated the association between migration and one of the four identified relationship paths. We found a wide variety of ways in which relationships and living arrangements evolve. Although both migrants and non-migrants practice non-residential relationships, it is most common among migrants, and migrant women in particular.