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Men's labor migration, spousal communication, and women's use of STD treatment services in rural Armenia

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Abstract

This study adds to the scant research on the association between labor migration and sexually transmitted diseases (STDs). It builds upon earlier findings that left-behind women had higher risks of contracting STDs than women married to non-migrants. Using data from a 2007 survey in rural Armenia, a setting with high rates of seasonal male migration and of STDs, we examine how migration influences spousal communication about STDs, and how this association, in turn, affects women's sexual health seeking behavior. The results show that migrants' wives were significantly more likely to talk about STD risks with their husbands than were non-migrants' wives. However, among women reporting STD symptoms in 12 months before the survey migrants' wives were less likely to talk to their husbands about these symptoms. We also find that women married to migrants were less likely to seek professional care for their STD symptoms than those married to non-migrants but this effect was positively moderated by women's communication about these symptoms with their spouses.

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Background

Women are biologically more susceptible to STDs/HIV than men. However, women's STD/HIV risks are further magnified in a socio-cultural environment with unequal gender division of labor and power. These inequalities usually translate into limited access to STD/HIV prevention information and into increased gender-specific stigma about STDs and HIV/AIDS. In many societies, women are discouraged from seeking information on sexual health and risks, and even when informed, to negotiate safe sex practices (Gupta, 2000). Moreover, studies have found that women who depend on their partners economically and socially, have even lower ability to negotiate safe sex practices with them (Gupta, 2000; Weiss, Whelan, and Gupta, 2000; Wingood and DiClemente, 2000).

In addition to being disproportionately vulnerable to STD/HIV infection, women also have limited access to professional health care in societies with unequal gender distribution of power. In traditional societies health care, like any other valuable resource, is distributed according to gender and social roles in the family, and decisions regarding health care seeking are usually made by men (Santow, 1995). In matters of sexual health, women's disadvantage is increased due to men's inadequate knowledge of female sexual morbidity. Thus Singh et al. (1998) found in India that even men living in urban areas or with higher education, who were generally more knowledgeable of female sexual and reproductive health than their rural or less educated counterparts, had a level of STD awareness which typically translated into inadequate and delayed treatment for women.

A precondition for health seeking behavior is the recognition and interpretation of symptoms by the individuals affected and by those around them (Ward et al. 1997). After the

symptoms have been recognized, health seeking behavior in general is affected by economic, socio-demographic, geographic, socio-psychological, socio-cultural and organizational factors (McKinley 1972, cited in Ward et al. 1997, p. 23). However, the decisions as to when, where and how to seek help for STD-like symptoms are usually most affected by cultural norms and social circumstances (Ward et al. 1997). Studies have found that the most powerful obstacle to seeking professional health care for sexual problems is the fear of stigmatization (Lieber et al. 2006, Fortenberry et al. 2002).

Thus, women along with higher biological vulnerability to STDs, also depend on their partners for health seeking decisions, and have to deal with the fear of social sanctions and stigma associated with seeking STD information and care in most traditional societies. These challenges are amplified for women with migrant partners. A study by Hughes, Hoyo, and Puoane (2006) in South Africa found that women with migrant partners had less power for sexual negotiation resulting in increased STD risks. The authors also observed that women married to migrants, especially those who saw their husbands more infrequently, were less likely to discuss STDs, HIV/AIDS and contraception with their husbands than were women whose contact with their migrant husbands was more frequent.

However, research on STD/HIV risks of non-migrant women with migrant partners remains limited. The few studies that have been conducted in the South African settings have produced inconsistent results. For example, Kishamawe et al. (2006) found that both men and women with a long-term mobile partner report more high-risk behavior and have higher HIV prevalence than men and women with non-migrant or short-term migrant partners. Yet, Lurie et al. (2002) found HIV risks are not associated with partner's migration but rather with the number of partners the left-behind partners had. It was also argued that both migrants and their non-migrant partners were more likely to contract HIV outside of marriage, and in about one-third of sero-discordant

couples women were the ones to be infected (Lurie et al., 2003). Similarly, Coffee, Lurie, and Garnett (2007), modeling the effect of migration on HIV epidemic in South Africa, concluded that the increased prevalence of HIV is due to increased high-risk behavior of both migrants and their non-migrant partners.

Most of the research on STD/HIV risks of left-behind women has been focused on African settings where multiple and often concurrent partnerships are common. The nature of marital and sexual partnerships is very different in other parts of the world, such as the transitional post-Soviet countries, that are believed to have high STD rates and growing HIV prevalence (Kelly and Amirkhanian, 2003; Buckley, 2009). The links between migration and STDs in those countries have been understudied. Previous research on male seasonal migration and STD risks among left-behind women in rural Armenia, one of the former Soviet countries, found that women with migrant husbands had higher risks of STDs than those with non-migrant husbands (Sevoyan and Agadjanian, 2010). The authors argued that the increased STD risks among left-behind women are more likely to result from high-risk behavior among their migrant husbands in areas of destination rather than sexual ties of their non-migrant wives in communities of origin. The study also found that the effect of men's migration on their wives' STD risks was moderated by household income; this finding can be explained by wealthier migrants' larger number of sexual partners and/or by their wives' decreased power to negotiate safer sex due to greater dependency on migrant remittances.

However, more research is needed to understand how men's seasonal migration translates into higher STD risks among their wives left behind in the context of high seasonal migration in post-Soviet Eurasia. This study adds to the understanding of these issues by looking at the associations between seasonal migration, STD-related communication between the spouses and women's health seeking behavior.

Based on the literature reviewed above, we propose two alternative hypotheses about the association between migration spousal communication on STDs. First, we think that migrants' wives will be more concerned about STD risks and therefore they well be more likely to discuss STD risks with their husbands than non-migrants' wives. However, we expect that women married to migrants will be less likely to communicate about their sexual health problems with their spouses than women married to non-migrants, because of the long-term separation.

We also expect that due to the increased fear of stigma during long-term absence of the husband, men's migration will be negatively associated with women's health seeking behavior for STDs.STD communication between the spouses, on the other hand, is expected to positively affect women's health seeking behavior, providing them with more information about the risks and care of STDs. In addition, we suggest that the association between husband's migration and wife's health seeking behavior will be moderated by the couple's communication over STDs. Some data suggest that migrant men have slightly higher perception of STD/HIV risks than non-migrant men (Collinson, et al. 2006). Therefore it can be expected that a woman's discussion of STD symptoms with a migrant spouse is more likely to result in seeking professional care than STD-related communication with a non-migrant partner.

The setting: Armenia

Armenia gained independence after the collapse of the Soviet Union in 1991. The fall of the Soviet rule was followed by a collapse of the economy, from which the country, and especially the rural areas, have not fully recovered until now. Due to the lack of job opportunities in rural areas, seasonal labor migration has become a major source of income for a large number of rural households. There is no official estimate of the number of seasonal migrants in the country, but according to some nationally representative studies, 8-9 percent of households were involved in seasonal labor migration between 2002 and 2007 (Minasyan et al, 2007). Ivakhnyuk (2006) put the

number of Armenian migrant workers abroad at about 800-900 thousand in the early 2000s, about 650 thousand of which were working in Russia. The majority of seasonal migrants are men of economically active ages (21-55), and three-fourth of male migrants are married.

The collapse of the Soviet regime has had devastating effects on the national health care system. The transition of health care from governmentally funded free services to private paid service resulted in a sharp decline in the quality and accessibility of health care in the country. The 2005 Armenia Demographic and Health Surveys (ADHS) provide some information on the health care utilization and barriers to health care in rural and urban areas. For example, about 14 percent of rural women reported a health problem in the last 3 months, but only about half of them (7.4 percent) reported to have had a medical consultation in the same period. The percent of urban women who had a health problem was 13.6 percent and about 8 percent reported to have a consultation. While the main barriers to health care reported by women in ADHS were financial costs and poor quality of services, about 24 percent of rural women aged 15-49 mentioned getting permission to go for a treatment as a problem for accessing health care, compared to about 17 percent of urban women of the same ages. This percent was especially high (32 percent) among women in Gegharkunik marz, the rural region from which the data for this study come.

The 2005 ADHS did not collect data on STD awareness but included questions on HIV/AIDS-related knowledge. According to 2005 ADHS, the knowledge of HIV/AIDS among Armenian women is very high. About 92 percent of rural women and 98 percent of urban women have heard of AIDS (92 and 93 percent respectively for men) (ADHS, 2005). However, men are reported to be more knowledgeable about the HIV prevention methods than women. The ADHS 2005 report on STD prevalence in the population shows that less than one percent of married women reported having an STD, but about 8 percent of them reported having an STD-like symptom. The low percent of STDs compared to self-reported STD-like symptoms might be associated with low access to health

care facilities for a diagnosis. The percentages of women with STD-like symptoms are especially high in Gegharkunik marz (about 20 percent), although the percent of women with self-reported STDs is only 1.2 in the region.

Data and Methods

Data

The data for this study come from a survey on Labor Migration and STI/HIV Risks conducted in rural Armenia in 2007. The survey was conducted in 31 villages in one marz (province) that is believed to have among the highest levels both of labor migration and of STD prevalence in the country. A total of 1240 women of reproductive age (18-45) married to migrants and non-migrants were randomly selected from the village residential rosters. The sampling procedure was designed so as to assure a balanced representation of the two migration categories. The survey questionnaire included questions on socio-demographic and economic characteristics, women's and their husbands' work history, reproductive history, and gender attitudes. A separate module of the questionnaire focused on STDs: women were asked about their experience with symptoms that are most commonly associated with STDs, and with specific diagnosed STDs.

Statistical models

Migration and STD communication: To test the hypothesis about the effect of men's migration on the spousal communication about STDs we look at the association of husbands' migration status with communication between the spouses about STD risks and their communication about STD-like symptoms reported by respondents. Both models are fitted using logistic regression for binary outcomes, employing random intercept approach to account for village-level clustering. The outcome in the first model is whether or not a woman had a conversation about STD risks with her husband in the last 12 months (coded as 1 if yes, and coded 0 otherwise). The main predictor in this model is husband's migration status in the year of the

survey (coded as 1 if migrant, and coded as 0 otherwise). The model controls for basic socio-demographic and economic characteristics, such as woman's age, age difference between husband and wife, woman's and her husband's education (coded 1 if specialized vocational and higher, and coded 0 if secondary or less), and household monthly income (logged to smooth the distribution). The model also controls for woman's participation in paid work outside of the household (coded yes=1, no=0). This control may also indirectly represent women's social networks outside of the household. As proxies for woman's social networks the model also controls for woman's religious participation (coded 1, if attended religious services in the last 4 weeks, and coded 0 if did not attend any services in the last 4 weeks), and the number of social visits in the last week as a proxy for social networking.

The outcome of the second model is whether or not the woman told her husband about her STD-like symptom(s) in the 12 months preceding the survey (coded as 1 if yes, and 0 otherwise). This analysis is limited to the subsample of 640 women who reported having at least one STD-like symptom in the last 12 months, including pain during urination, ulcers or sores in the genital area, itching in or around vagina, vaginal bleeding (non-menstrual), and genital warts. The controls are identical to the model above.

Migration, STD communication and woman's health seeking behavior: To examine the effect of husband's migration on woman's health seeking behavior we also use random intercept logistic regression for binary outcomes. The outcome of this model is whether or not a woman has seen a doctor or nurse for her STD-like symptoms (coded as 1 if yes, 0 otherwise). Again, the analysis is limited to the subsample of women who reported having STD-like symptoms in the last 12 months. Husband's migration status in the survey year is the first main predictor in this model. In addition, we test the effect of women's communication about STD risks with her husband and spousal communication about women's STD-like symptoms on the health seeking behavior. The

model controls for the socio-economic and social network variables similar to the previous models.

To test whether or not spousal communication over STDs moderates the association between husband's migration and woman's health seeking behavior, we also add to the model the interaction term between husband's migration status and whether or not the woman told her husband about her STD-like symptoms. All the models are fitted using GLIMMIX procedure for binary outcomes in SAS (Schabenberger, 2009).

Results

The results of the random intercept logistic regression models are presented as odds ratios in Tables 1 through 4; a value above one signifies a positive association, and a value below one means a negative association. Model A in each table presents the baseline model predicting the effect of husband's migration status on the outcome variable when no other variables are controlled for. The control variables are added in the other models in each table.

The results in Table 1 provide support to our hypothesis, showing that husband's migration status is positively associated with the probability of having a conversation about STD risks between the spouses, and that this effect is statistically significant, net of other factors. The odds of a woman having a conversation about STD risks with her husband are 2.4 times higher among women married to migrants than that of women married to non-migrants.

[Table 1 about here]

The results in Table 2 also support our hypothesis that migrant's partners are less likely to communicate with their husbands about their sexual health problems. The results show, that the odds of a woman telling her husband about her STD-like symptoms is 48 percent lower among migrants' wives than among non-migrants' wives, controlling for other factors. Notably, increased

age difference between the spouses lowers the odds of a woman sharing with her husband her sexual health issues, while higher education is associated with higher odds of spousal communication about sexual health problems, net of other factors. However, the effects of both factors are only significant at statistically marginal level.

[Table 2 about here]

The analysis of women's health seeking behavior for their STD-like symptoms shows that men's migration reduces the odds of a woman seeing a doctor or a nurse for her STD-like symptoms, not controlling for other factors (Model A, Table 3). However, the effect is only significant at $p<0.1$ level. When the socio-economic and social network controls are added to the model, husband's migration status is no longer a significant predictor of woman's health seeking behavior. The detailed analysis not presented in Table 3, shows that the effect of husband's migration status on woman's health seeking behavior is mediated by communication about her STD symptoms with the husband. Thus, we find that telling the husband about the STD-like symptoms significantly increases the odds of a woman seeing a specialist by about 3.8 times, controlling for other factors. To test the moderating effect of the spousal communication about woman's STD-like symptoms on the association between husband's migration status and woman's health seeking behavior, we add an interaction term between the two (Model C, Table 3). The results show a strong positive moderating effect of spousal communication at a statistically significant level. Thus, the main effect of husband's migration status, which now represents the effect of husband's migration on health seeking behavior for women who did not tell their husbands about their STD-like symptoms, shows that the odds of a woman seeing a doctor for her symptoms is lower by about 75 percent for women married to migrants than for those married to non-migrants. The main effect of spousal communication about woman's STD symptoms, which here represents the effect of spousal communication for those married to non-migrants, shows

positive association with woman's health seeking behavior, however, it is significant only at a statistically marginal level.

[Table 3 about here]

To illustrate these results graphically, Figure 1 shows the predicted probabilities of a woman seeing a doctor for STD-like symptoms by husband's migration status and whether or not the woman told her husband about her symptoms. The graph shows that women married to migrants are more than 3 times more likely to see a doctor if they have told their husbands about their symptoms. The probability of seeing a doctor is also higher among women married to non-migrants if they told their husbands about their symptoms, compared to those who did not, but the difference is much smaller than in case of migrants' wives. When comparing women married to migrants and non-migrants, we can also observe that the probability of seeing a doctor between migrants' and non-migrants wives is comparable if they have told the husband about their symptoms. However, the probability of visiting a doctor is much lower among migrants' wives than among non-migrants' wives if they have not talked to husband about their symptoms.

Discussion

Women's excessive biological susceptibility to STDs, exacerbated by unequal gender relationships in patriarchal socio-cultural environments has been acknowledged in the literature. It has also been previously observed that women with migrant partners have increased risks of STDs/HIV and less ability to negotiate safer sex practices. Adding to the existing research, our study looks at how these unequal gender relations are reflected in women's communication about STDs with their spouses, and how this communication further affects women's health-seeking behavior in the context of male seasonal migration.

The results of our study show that women married to migrants are more likely to talk to their husbands about STD risks but are less likely to tell them about their STD-like symptoms than women married to non-migrants. It is possible that migrants' wives are aware of their husbands' higher risks of contracting STDs and are more concerned about them than non-migrants' wives. They are more likely to talk to their husbands about STDs, probably to remind them of the possible risks and to urge them to avoid risky behavior than non-migrants' partners are. However, we find that migrants' wives are less likely to tell their husbands about their STD-like symptoms than are non-migrants' wives, net of other factors. As Hughes, Hoyo and Puoane (2006) observed in South Africa, women in traditional settings find it difficult to talk about their sexual health and it is likely that continuous separation from their partners makes such conversations even more problematic. At the same time, women married to migrants might be reluctant to tell their husbands about their sexual health problems so as not to trigger suspicions of their own infidelity. Besides, women simply may be unable to find an appropriate moment during their migrant husbands' short stays at home, which are typically filled with a variety of social events, gatherings, celebrations, etc., for conversations on such sensitive topics.

The results of the analysis of women's use of professional medical care for STD symptoms indicate that husband's migration status overall is not a significant predictor. However, the analysis also reveals that the association between husbands' migration status and women's health seeking behavior is moderated by the communication between the spouses about woman's STD-like symptoms. As observed previously in the literature, women's use of health care services for sexual health problems depends on their male partners' awareness of women's reproductive health (Singh et al. 1998). And some evidence suggests that migrant men are better aware of STD/HIV risks than non-migrant men (Collinson et al., 2006), probably because of their personal experience and/or experience of other migrant men in their personal networks. Perhaps as a

result of this elevated awareness STD-related communication between the spouses in migrants' households significantly raises the likelihood of women's use of health care services to treat STD-like symptoms but it does not exert a comparable influence on non-migrants' wives health seeking behavior.

The limitations of our study must be acknowledged. Thus, the survey respondents were not tested for STDs, and our analysis uses STD-like symptoms that may or may not be related to an actual disease. As is often the case with cross-sectional data, causal relationships in the observed associations can be implied but not directly measured. These limitations notwithstanding, our study's findings contribute to the scarce research on the associations between seasonal male migration and the sexual health of women left behind. They also provide a valuable insight into the interconnections between gender dynamics and sexual health in non-western settings, enhancing the case for men's involvement in the efforts aimed at improving women's reproductive and sexual health.

Table 1. Random intercept logistic regression predicting the odds of a woman having a conversation with her husband about STD risks

	Model A	Model B
Husband's migration status		
Non-migrant	1	1
Migrant	**2.184** **	**2.347** **
Woman's age		1.003
Age difference between husband and wife		0.995
Marital duration		0.977
Woman's education		
Secondary and less		1
Vocational and higher		1.081
Husbands' education		
Secondary and less		1
Vocational and higher		0.989
Household monthly income (logged)		0.987
Woman's labor-force participation		
Currently not working outside of the HH		1
Currently working outside of the HH		**1.440** †
Woman's religious participation		
Attends religious services		1
Does not attend religious services		**0.557** **
Number of weekly social visits		1.016
-2 Res Log Pseudo-Likelihood	5357.9	5396.8
Number of cases	1238	1231

Notes: Significance levels- ** $p<0.01$; * $p<0.05$; † $p<0.1$.

Table 2. Random intercept logistic regression predicting the odds of a woman telling her husband about her STD-like symptoms

	Model A	Model B
Husband's migration status		
Non-migrant	1	1
Migrant	**0.506** **	**0.518** *
Woman's age		0.993
Age difference between husband and wife		**0.937** †
Marital duration		1.021
Woman's education		
Secondary and less		1
Vocational and higher		**1.782** †
Husbands' education		
Secondary and less		1
Vocational and higher		1.580
Household monthly income (logged)		1.025
Woman's labor-force participation		
Currently not working outside of the HH		1
Currently working outside of the HH		0.968
Woman's religious participation		
Attends religious services		1
Does not attend religious services		1.027
Number of weekly social visits		1.021
-2 Res Log Pseudo-Likelihood	3232.73	3301.4
Number of cases	640	640

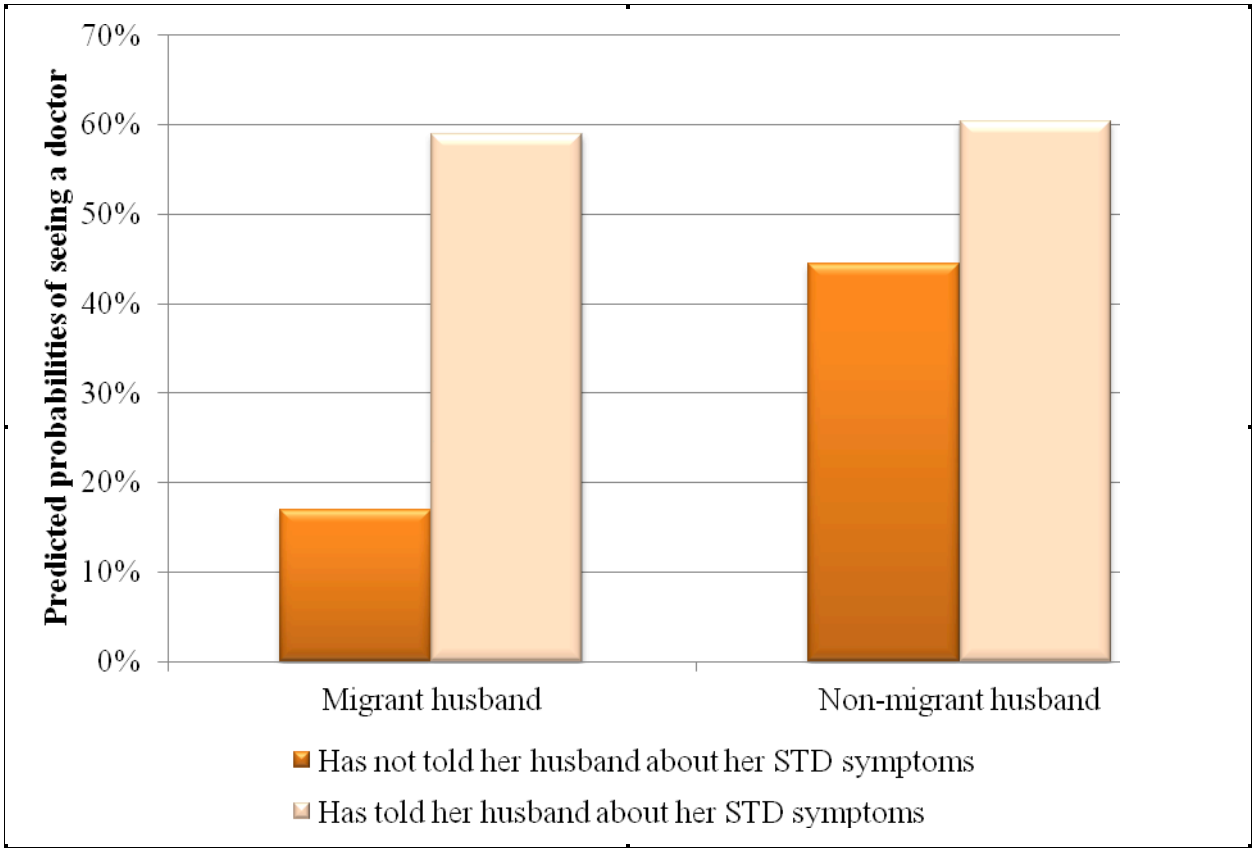
Notes: Significance levels- ** $p<0.01$; * $p<0.05$; † $p<0.1$.

Table 4. Random intercept logistic regression predicting the odds of a woman seeking professional medical care for her STD-like symptoms

	Model A	Model B	Model C
Husband is a non-migrant (ref.)	1	1	1
Husband is a migrant	**0.722** †	0.774	**0.254** **
Woman's age		0.967	0.963
Age difference between husband and wife		1.027	1.027
Marital duration		1.036	1.039
Woman's education- Secondary and less (ref.)		1	1
Woman's education- Vocational and higher		1.244	1.251
Husbands' education- Secondary and less (ref.)		1	1
Husbands' education- Vocational and higher		1.196	1.212
Household monthly income (logged)		**1.272** *	**1.280** *
Woman's labor-force participation			
Currently not working outside of the HH		1	1
Currently working outside of the HH		0.742	0.757
Woman's religious participation			
Attends religious services		1	1
Does not attend religious services		0.865	0.848
Number of weekly social visits		1.031 †	1.032 †
Woman has had a conversation about STD risks with her husband			
No (ref.)		1	1
Yes		0.830	0.801
Has told her husband about her STD symptom(s)			
No (ref.)		1	1
Yes		**3.833** **	1.901 †
Migrant husband*Told her husband about her symptoms		-	**3.712** *
-2 Res Log Pseudo-Likelihood	2815.82	2920.47	2934.12
Number of cases	640	640	640

Notes: Significance levels- ** $p<0.01$; * $p<0.05$; † $p<0.1$.

Figure 1. Predicted probabilities of seeing a doctor for STD-like symptoms by husband's migration status and whether or not the woman told her husband about her symptoms.



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