



Come abroad with me: the role of partner characteristics and couple acculturation gaps on individual psychological adjustment

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Although many individuals migrate to a new country with their romantic partner, most acculturation research has focused on individual factors related to migration-related psychological adjustment without considering couple influences. The current research investigates traditional predictors of psychological adaptation – mainstream and heritage acculturation, motivation to migrate, and perceived discrimination – from the perspective of both migrants and their partners. Participants were 151 French migrant couples ($n = 302$) living in Canada. We conducted mixed-effects regression analyses (HLM) predicting psychological adaptation within an actor-partner interdependence modelling framework. In line with past results, actors' motivation to migrate and mainstream acculturation were positively associated with psychological adaptation, whereas perceived discrimination was negatively associated with it. Contrary to our hypotheses, the actor's heritage acculturation was negatively associated with psychological adaptation. Above and beyond these individual-level predictors, our results revealed a positive effect of partner's motivation to migrate and a negative effect of partner's perceived discrimination. Finally, acculturation gaps were significantly associated with psychological adaptation. Mainstream acculturation gaps seem to be detrimental to migrants' psychological adaptation, whereas heritage acculturation gaps were associated with greater psychological adaptation. These findings underscore the necessity to better understand how romantic relationship dynamics following migration play out in individual-level migration outcomes.

Keywords: Acculturation gap; psychological adjustment; migrants couples; acculturation orientation; motivation to migrate

Immigrating to a new country presents many challenges to migrants and leads to an extensive reconfiguration of their life. Psychological adjustment – how effectively one manages and copes with the stress generated by life transitions (Searle and Ward 1990) – is a key index of how successfully migrants negotiate these challenges. In a migration context, psychological adjustment refers to how at ease and satisfied or worried and inappropriate a person feels with respect to being in the new cultural environment (Demes and Geeraert 2014). Poor psychological adjustment entails not only suffering for migrants, including, for example, depressive symptoms (Aroian and Norris 2003; Moztarzadeh and O'Rourke 2015), but also costs for the receiving society (Pincus and Pettit 2001; Stoudemire, et al., 1986). Characterising an-

tecedents of migrants' psychological adjustment is therefore important, both on individual and societal levels. Numerous studies have examined individual-level antecedents, such as psychological acculturation or perceived ethnic discrimination (Berry 1997; Prellow, Mosher, and Bowman 2006; Smith-Castro 2003). This body of work is important but it ignores the fact that, in many cases, immigration is not an individual, but a couple or family process. For example, most of Canada's 200,000 yearly newcomers migrate as a couple or entire family unit (Bonikowska and Hou 2017).

Past research on couple relationships has shown that one's romantic partner strongly influences one's psychological well-being (Campbell, Sedikides, and Bosson 1994; Davila et al. 2017; Gere et al. 2011) and how one copes with major life challenges (Falconier, Nussbeck, and Bodenmann 2013; Kayser, Watson, and Andrade 2007). Applied to the migration context, these findings suggest that considering migrants' couple context may be key to better understand-

ing their psychological adjustment. Accordingly, we examine traditional antecedents of psychological adjustment – acculturation, motivation and discrimination – from a dyadic perspective. Our overarching hypothesis is that beyond migrants' personal characteristics, their partner's characteristics and discrepancies within the couple are also associated with migrants' personal psychological adjustment.

Migration-related psychological adjustment

Searle and Ward (1990) argued that migration-related psychological adjustment is best understood within a stress and coping framework (Lazarus and Folkman 1984), given that life changes associated with migration generate stressors that must be effectively managed through coping resources. Psychological adjustment problems lead to personal suffering among migrants, for example, in terms of anxiety related to acculturative stress (Berry 2006; Rudmin 2009) or depressive symptom related to isolation and feeling out of place (Bhugra 2003; Vega, Kolody, and Valle 1988). Characterising psychological adjustment by measuring overall psychological distress or well-being is common, but this conceptualisation does not capture psychological experiences unique to the migration experience, such as the excitement about being in the new country or the feeling that one doesn't fit in the dominant culture. Accordingly, we use a measure of migration-related psychological adjustment that assesses affective responses to migration-relevant experiences. Given psychological adaptation's personal and societal significance in multicultural societies, a wealth of crosscultural psychology research has investigated its antecedents, which we briefly review next.

Individual-level antecedents of migration-related psychological adjustment

Facilitating factors

Acculturation is arguably the most researched antecedent of migrants' psychological adjustment. It refers to the changes that people undergo when they have prolonged contact with a cultural context different from the one in which they have been socialised (Berry 1997; Ward and Geeraert 2016). These changes affect most life domains, including not only language and practices but also identities and cognitive and emotional response patterns (Doucerein 2019; Schwartz et al. 2010). The dominant theoretical framework in cross-cultural psychology conceptualises acculturation as bidimensional and distinguishes between mainstream and heritage acculturation, depending on the culture with respect to which changes operate (Berry 1997; Silverstein and Chen 1999). Mainstream acculturation reflects the extent to which migrants adopt the mainstream cultural tradition, and heritage acculturation is the extent to which they maintain their heritage cultural engagement. A meta-analysis by Nguyen and

Benet-Martínez (2013) revealed that greater acculturation toward both cultural streams is associated with greater psychological adjustment.

Motivation to migrate has also emerged as an essential determinant of migrants' adaptation (Berry 1997, 2005). People's motives to migrate can be involuntary or forced, such as escaping an oppressive political system or reflect their own volition and positive expectations about the receiving country, such as seeking better job opportunities (Kunz 1973; Ward, Bochner, and Furnham 2001). These motives have contrasting implications for psychological adjustment. The former is associated with lower psychological adjustment following migration than the latter. In a related vein, self-determined motivation to migrate, reflecting the extent to which an individual is intrinsically driven to migrate for enjoyment, interest or inherent satisfaction, is associated with a better psychological adjustment during settlement (Chirkov et al. 2007, 2008; Hull 1979). A study indicated that greater motivation to adopt the dominant Canadian culture was associated with a more positive experience in Canada overall, with greater psychological and sociocultural adjustment, and with increased odds of pursuing permanent residency (Dentakos 2014). In short, the more individuals are intrinsically motivated to migrate, the better their adaptation in the receiving country is.

Impeding factors

Perceived ethnic discrimination, referring to differential treatment because of one's ethnicity or cultural background, is a crucial element negatively impacting migrants' adaptation (Giuliani, Tagliabu and Regalia 2018; Montgomery and Foldspang 2008; Ngo 2017). For example, in a mixed design study of over 200 first- and second-generation Muslim migrants in Italy, Giuliani, Tagliabu and Regalia (2018) found that greater perceived discrimination was directly associated with higher depression and lower satisfaction with participants' decision to migrate, in particular for second-generation participants. Perceived discrimination can even lead to the decision to leave the receiving country to go back to one's country of origin (Kunuroglu et al. 2018).

Limitations of research on migration-related psychological adaptation antecedents

The research just reviewed has one noteworthy caveat. By concentrating on individual-level correlates of psychological adjustment, this body of work ignores the fact that many migration instances occur as a couple or family unit and findings that migrants' social network is closely tied to their adaptation (Doucerein et al. 2015, 2021; Kashima and Loh 2006; Repke and Benet-Martínez 2018). As a step toward addressing this issue, we focus here on the role that romantic partners play in migrants' psychological adjustment. A person's romantic partner constitutes the most proximal layer of

that person's social network, and it is often the closest relationship that individuals form (Hansen, Fallon, and Novotny 1991; Johnson and Leslie 1982). A person's romantic partner has a major influence on that person's way of life, values, identity and resilience (Kerig 2014; Ledbetter, Carr, and Lynn 2020; Serido et al. 2015; Slotter, Gardner, and Finkel 2010), and may therefore play a key role in migrants' adaptation following immigration.

Couple relationships and migration

Past research on couple dynamics and migration has shown that migration taxes couples' adaptive resources and increases tensions between romantic partners. As a result, migrant couples experience more marital distress (Ben-David and Lavée 1994; Negy and Snyder 1997; Santos, Bohon, and Sánchez-Sosa 1998), more domestic violence (Caetano, Ramisetty-Mikler, and McGrath 2004; Hyman, Guruge, and Mason 2008) and more intracouple conflicts and separations (Ben-David and Lavée 1994; Darvishpour 2002; Flores et al. 2004; Grzywacz et al. 2009; Min 2001) than locally-born couples. Some research surveyed specific factors negatively affecting migrants' romantic relationships, with an emphasis on gender role values and partners' respective acculturation trajectories. In both cases, similarities and discrepancies between partners seem to influence relationship outcomes.

Gender role values

Migrants can discover new gender role values in the receiving country and adopt these values to a different extent than their partner. Migration-related disagreements between partners over their respective gender roles can increase tensions in the couple (Ben-David and Lavée 1994; Cheung 2008; Grzywacz et al. 2009; Maciel, Van Putten, and Knudson-Martin 2009). For example, a qualitative study conducted by Accordini, Giuliani, and Gennari (2018) among migrant Muslim women to Italy revealed that the discovery of new gender roles values post-migration transformed their couple relationship. Couples that adjusted their respective values, roles and couple's way of life experienced greater intimacy and developed a more balanced couple relationship. In contrast, those who held on to more traditional gender role values felt more isolated. In short, immigration seems to challenge migrants' gender role values, and the way they cope with those challenges impacts marital conflict and relationship satisfaction.

Acculturation gaps within couples

In the context of couple relationships, acculturation gaps refer to discrepancies between partners' respective mainstream and heritage acculturation levels. Past research has established that greater acculturation gaps – be it in terms of

language, behaviours or identification – are associated with more within-couple conflicts and less relationship satisfaction (Ben-David and Lavée 1994; Darvishpour 2002; Flores et al. 2004; Grzywacz et al. 2009; Guruge et al. 2010; Miranda et al. 2006; Vega, Kolody, and Valle 1988). In a study of almost 400 Mexican-origin migrant couples, Cruz et al. (2014) further demonstrated that greater acculturation gaps were associated with lower marital quality. Another study of couples from the Former Soviet Union in Germany and Israel showed that differences between partners' mainstream language proficiency predicted marital dissatisfaction and that this effect was exacerbated over time (Kanat-Maymon et al. 2016). By examining heritage and mainstream acculturation, these authors also highlighted the importance of taking both heritage and mainstream acculturation into account when analyzing links between migration and romantic relationships – a distinction that is seldom considered.

Romantic difficulties arising from both partners acculturating differently are even more pronounced if this difference does not respect traditional gender role values. For example, a study of Russian-speaking heterosexual couples in the United States showed that both partners were less romantically satisfied when husbands were less acculturated to the American culture (in the language domain) than their wives (Kisselev, Brown, and Brown 2010). Indeed, such a gendered acculturation pattern challenges traditional male roles regarding economic activity and involvement in the public domain (here, the American culture).

Limitations of research on acculturation gaps within couples

The above body of work has looked at the impact of migration-related couple dynamics on couple-level consequences such as marital satisfaction. Missing are investigations of how these migration-related couple dynamics, including both partner and couple characteristics, contribute to migrants' individual outcomes such as psychological adjustment. Yet, a wealth of dyadic research has established that romantic partners strongly influence how individuals cope with major life challenges, such as illness or life transitions, and therefore affect individual outcomes (Falconier, Nussbeck, and Bodenmann 2013; Kayser, Watson, and Andrade 2007).

Present research

Applying insights from dyadic research to the migration context, we set forth the overarching hypothesis that migration-related psychological adjustment will be associated not only with migrants' individual characteristics (replicating past research) but also with characteristics of their romantic partner, as well as acculturation gaps between partners. Specifically, the present study examines associations

between individual migration related psychological adjustment and traditional acculturation, motivation and discrimination correlates from an actor-partner perspective. We use the Actor-Partner Interdependence Model (APIM; Cook and Kenny 2005) as a guiding analytic framework. In this model, a person's dependent variable score (here, psychological adjustment) is affected by her own independent variable score (e.g. own mainstream acculturation) through an *actor effect*, and by her partner's independent variable score (e.g. partner's mainstream acculturation) through a *partner effect*. This partner effect directly models mutual influences that may occur between individuals involved in a dyadic relationship, over and above actor effect.

In line with past research, we expect that actor's (a) motivation to migrate, (b) mainstream acculturation and (c) heritage acculturation will all be positively associated with actor's migration-related psychological adjustment, whereas (d) perceived discrimination will be negatively associated with it (**H1**). Building on dyadic research findings and APIM postulates, we also expect mirror partner effects, whereby partner's (a) motivation to migrate, (b) mainstream acculturation and (c) heritage acculturation will be positively associated with actor's migration-related psychological adjustment, and partner's (d) perceived discrimination will be negatively associated with it (**H2**).

In addition to partner effects, the present study also extends work on couple dynamics and migration to individual psychological adjustment outcomes by examining acculturation gaps as a couple-level characteristic. Several methods have been used in the past to operationalise acculturation gaps: absolute value of differences in acculturation scores (Céspedes and Huey 2008; Merali 2002), contrast between Berry's acculturation strategies (Berry 1997) and interaction between actor and partner acculturation scores (Cruz et al. 2014; Ho 2010; Telzer 2010). Following best practices (Telzer 2010), we used the interaction approach, which allows us to consider individual and dyadic contributions to migration-related psychological adjustment. This method also allows us to probe whether a person's acculturation has differential associations with psychological adjustment depending on her partner's acculturation. In line with past research, we expect that acculturation gaps with respect to (a) mainstream and (b) heritage cultures will be negatively related to migration-related psychological adjustment (**H3**).

Previous research reported that conflicts emerged between heterosexual partners when gender role values were challenged, especially in situations where women challenged their couple's originally traditional gender role values by accessing more economic power than their male partner (Kanat-Maymon et al. 2016; Kisselev, Brown, and Brown 2010). Based on past work, we expect a moderating role of gender role values, specifically that partner's greater endorsement of traditional gender role values combined with

actor's greater mainstream acculturation will be negatively associated with actor's migration-related psychological adjustment (**H4**). Finally, we expect the above effects to hold when considering participants' sex and proportion of life lived in Canada, and couples' relationship duration and presence/absence of children as potential confounding factors.

We conducted this study among French migrants to Quebec, Canada, because they share the same dominant language as Quebecers (even though pragmatic aspects of language or more implicit sociolinguistic features may differ). Language can play a considerable role in post-migration adaptation, both for individuals and couples, because of its potential impact on access to the dominant culture and resources within it (Kanat-Maymon et al. 2016; Kang 2006; Kisselev, Brown, and Brown 2010). Thus, a French-speaking sample controls for the potentially overwhelming influence of language at the design level and ensures that this dimension will not obscure effects related to other cultural aspects of migration and acculturation.

Methods

Participants and procedure

Participants were 302 migrants from France to Quebec, Canada, making up 151 couples that had formed prior to immigration. Their age ranged from 19 to 52 years ($M = 28.5$ years, $SD = 5.0$ years). They had been involved in their romantic relationship for 6 years and 11 months on average ($M = 6.9$ years; $SD = 4.2$ years) ranging from less than a year to 45 years and had immigrated for an average of 2 years and 4 months ($M = 2.3$ years; $SD = 2.6$ years) ranging from less than a year to 18 years. Participants were recruited via immigrant groups on Facebook. They were invited to complete an online survey about their immigration process and romantic relationship. This study on acculturation and post-immigration adaptation was part of a larger project on immigrating couples. The ethical review board of the corresponding author's university approved the project. Participants provided informed consent and received CAD10 each as compensation for their time, with a CAD5 bonus if both partners completed the survey.

Measures

All scales were rated using a continuous slider (rather than choice buttons), given that data obtained this way may show higher inter-rater reliability (Wall et al. 2017) and be less prone to ceiling effects (Voutilainen et al. 2016) compared to discrete rating scales with a limited number of options to choose from.

Acculturation

The Brief Acculturation Scale (BAOS; Demes and Geeraert 2014) assesses acculturation toward migrants' heritage

(here, French; BAOS-H, $\alpha = .82$), and mainstream (here, Canadian; BAOS-M, $\alpha = .82$) cultures. Each subscale includes four items with mirror wording, such as 'It is important for me to have French/Canadian friends'. Responses to all items were scored on a slider ranging from (0) 'Strongly Disagree' to (100) 'Strongly Agree', and averaged to create total scores.

Motivation to migrate

Participants responded to an item, created for the purpose of this study, assessing their motivation to migrate to Canada. The item was 'When my partner and I decided to move to Canada, I was enthusiastic about the idea of living in Canada'. Responses were scored on a slider ranging from (0) 'Not at all' to (100) 'Totally'.

Perceived ethnic discrimination

The discrimination subscale of the Riverside Acculturative Stress Inventory (RASI-D; Benet-Martínez and Haritatos 2005) assesses participants' perceptions of being discriminated against in Canada. This subscale includes three items such as 'I feel discriminated against by mainstream Canadians because of my cultural/ethnic background' ($\alpha = .88$). Responses to all items were scored on a slider ranging from (0) 'Strongly disagree' to (100) 'Strongly agree', and averaged to create a total score.

Traditional gender role values

The Traditional Egalitarian Sex-Roles Scale (TESR; Larsen and Long 1988) assesses traditional gender role values. This scale includes 19 items such as 'It is just as important to educate daughters as it is to educate sons' ($\alpha = .69$). Responses to all items were scored on a slider ranging from (0) 'Strongly disagree' to (100) 'Strongly agree', and averaged to create a total score.

Migration-related psychological adjustment

The Brief Psychological Adjustment Scale (BPAS; Demes and Geeraert 2014) assesses psychological adjustment in the context of migration. In contrast to general measures of psychological adjustment that assess general affective experiences, the BPAS was designed to be specific to affective experiences related to migration and cultural relocation. This scale includes eight items such as 'Thinking about living in Canada, in the last two weeks, how often have you felt happy with your day-to-day life in Canada?' ($\alpha = .83$). Responses to all items were scored on a slider ranging from (0) 'Never' to (100) 'Always', and averaged to create a total score.

Results

Data preparation and analytic strategy

Univariate outliers at the aggregate level were winsorized, whereby extreme values outside three median absolute deviations around the median were brought within that interval for each variable (Leys et al. 2013). Specifically, 16 values were winsorized for proportion of life lived in Canada, nine for perceived discrimination, five for relationship length, and three or fewer for all other variables. No multivariate outliers were detected based on Mahalanobis distances evaluated at $p < .001$. Finally, all variables were missing less than 5% of observations each, with one exception: 18% of perceived discrimination scores were missing. The result of a non-parametric alternative to the Hawkins test (Jamshidian and Jalal 2010) was statistically non-significant ($p = .36$), indicating that missing data were missing completely at random. Missing data were imputed using expectation maximisation.

We conducted multilevel regressions predicting psychological adjustment within an APIM framework (individuals nested within dyads; Campbell and Kashy 2002), using R (R Core Team, 2018) packages lmer (De Boeck et al. 2011) and lmerTest (Kuznetsova, Brockhoff, and Christensen 2017). Dyadic variables included relationship length, number of children and acculturation gaps. All other predictors were person-level variables. Acculturation gaps were operationalised as the interaction between actor and partner acculturation scores and were computed separately for mainstream and heritage cultures. We entered variables hierarchically, with sociodemographic covariates in a first step, actor effects in a second step, partner effects in a third step, acculturation gaps in a fourth step and variables related to gender roles in a fifth step. For all hypotheses, we further probed gender differences using 3-way interactions (actor's values \times partner's values \times actor's gender). None of these interactions were statistically significant, indicating that there were no significant gender differences in the effects observed. Thus, for the sake of parsimony, we did not retain these gender interactions in the analyses reported here.

The covariance between partners' residuals was positive ($p = .38$) and was therefore modelled using random intercepts. We computed proportions of remaining residual and intercept variance (compared to the baseline intercept-only model) accounted for by predictors as R^2 -type measures of effect sizes, following typical practices in multilevel analyses (Singer and Willett 2003). Total scores on questionnaires were divided by 100, thus bringing them within a 0–1 interval to ensure similar orders of magnitude among all predictors and thus facilitate the reporting of coefficients.

We verified statistical assumptions of normality, linearity and homoscedasticity by visually inspecting residuals. Linearity and homoscedasticity assumptions were respected. Residuals were normally distributed (skewness = $-.47$, kur-

tosis = .12), and so were random effects (skewness = -.14, kurtosis = 1.21). There was no problem of multicollinearity, with all VIFs < 2.5 (Myers 1990; Pituch and Stevens 2016). An omnibus test showed that dyads were indistinguishable according to sex ($\chi^2 = (16) = 22.26, p = .13$).

Descriptive results

Table 1 shows zero-order correlations among the numeric variables. Overall, participants report fairly high levels of mainstream acculturation ($M = 75.3$; $SD = 18.4$), motivation to migrate ($M = 89.9$; $SD = 15.1$) and psychological adjustment ($M = 70.7$; $SD = 18.2$), whereas levels of traditional gender role values ($M = 9.4$; $SD = 9.4$) and perceived discrimination ($M = 25.2$; $SD = 21.7$) are fairly low. Most correlations among variables go in expected directions. Participants with higher motivation to migrate, greater mainstream acculturation, greater heritage acculturation and lower perceived discrimination report greater migration-related psychological adjustment. Motivation to migrate is also positively associated with mainstream acculturation.

Baseline model and covariates

For migration-related psychological adjustment, the intraclass correlation of .37 and statistically significant intercept variance ($\sigma = .012$, 95% CI = [.01, .02], $\chi^2 (1) = 4.24, p = .04$) indicate that a substantial proportion of variance can be attributed to couple characteristics. In the following sections, we provide standardised results of the final mixed-effects regression with all predictors. Table 2 presents these results in unstandardised form (Model 5) as well as the results of each intervening step. Regression coefficients for sex ($\beta = .19$, 95% CI = [.03, .36], $SE = .01, p = .03$) and having children ($\beta = .57$, 95% CI = [.20, .95], $SE = .04, p = .00$) are significant and positive, indicating that male participants experience greater psychological adaptation and that having children is also associated with greater psychological adaptation. Other sociodemographic covariates are not associated with psychological adaptation. The introduction of these variables in Step 1 statistically significantly improves model fit ($\chi^2 = 12.65$, $df = 4, p = .01$), explaining 2.1% of residual variance and 4.6% of intercept variance.

Actor effects

Regression coefficients for actor's mainstream acculturation ($\beta = .15$, 95% CI = [.04, .25], $SE = .05, p = .01$) and motivation to migrate ($\beta = .21$, 95% CI = [.11, .32], $SE = .07, p < .001$) are significant and positive, indicating that participants who adopt the mainstream culture to a greater extent and who were more motivated to migrate to Canada experience greater psychological adaptation. Conversely, actor's heritage acculturation ($\beta = -.25$, 95% CI = [-.36, -.15], $SE = .04, p < .001$) and perceived discrimination ($\beta = -.19$, 95% CI

= [-.29, -.09], $SE = .05, p < .001$) scores are negatively associated with psychological adaptation scores, indicating that maintaining one's heritage culture and feeling discriminated against to a greater extent is linked to lower adjustment. The introduction of actor effects in Step 2 significantly improves model fit ($\chi^2 = 67.42$, $df = 4, p < .001$) and explains a substantial proportion of variance in psychological adaptation as revealed by changes in R^2 -type values: 11.64% additional residual variance and 34.32% additional intercept variance.

Partner effect

The significant and positive coefficient for partner's motivation to migrate ($\beta = .11$, 95% CI = [.00, .22], $SE = .07, p = .04$) indicates that participants whose partner was more highly motivated to migrate experience more psychological adaptation. In addition, the significant and negative coefficient for partner's perceived discrimination ($\beta = -.14$, 95% CI = [-.24, -.04], $SE = .04, p = .01$) indicates that participants whose partner feels more discriminated against experience less psychological adaptation. The other partner effects are not significant, suggesting that one's partner's mainstream/heritage acculturation is not associated with one's adjustment. The introduction of partner effects in Step 3 increases model fit ($\chi^2 = 12.31$, $df = 4, p = .02$) and accounts for additional residual variance and intercept variance, 2.2 and 1.8 additional percents, respectively.

Acculturation gaps

Interactions between actor's and partner's mainstream acculturation scores ($\beta = .12$, 95% CI = [.01, .23], $SE = .29, p = .03$) and between actor's and partner's heritage acculturation scores ($\beta = -.13$, 95% CI = [-.24, -.02], $SE = .18, p = .02$) are both significantly related to psychological adaptation scores, indicating that mainstream and heritage acculturation gaps are associated with participants' migration-related psychological adjustment. We conducted simple slopes analyses to further probe these interactions. Figure 1 shows that in the presence of a partner with low mainstream acculturation (one standard deviation below the mean), actor's mainstream acculturation is not related to his or her own psychological adaptation (unstandardised simple slope $b = .03, p = .70$). However, when one's partner's mainstream acculturation is high (one standard deviation above the mean), actor's mainstream acculturation is positively related to his or her own adjustment (unstandardised simple slope $b = .27, p < .001$). The Johnson-Neyman interval (Preacher, Curran, and Bauer, 2006) indicates that this positive association between actor's mainstream acculturation and adjustment starts being significant when partner's mean-centred mainstream acculturation score is superior to -.06 (or .33 SD below the mean, with observed mean-centred values range [-0.50, 0.25]).

Figure 2 shows that in the presence of a partner with low heritage acculturation (one standard deviation below the

Table 1*Pearson correlations among numerical variables.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Actor mainstream acculturation		.14*	.13*	-.07	.33***	.09	-.09	-.03	.00	.08	.18**	.08	-.04	.04	-.04
(2) Actor heritage acculturation			-.06	.19***	-.14 *	-.01	.08	-.04	.20***	.07	-.26 ***	-.05	-.06	.10	-.04
(3) Partner mainstream acculturation				.15*	.09	.33***	-.03	-.04	.06	-.01	.07	.17**	-.03	.00	-.05
(4) Partner heritage acculturation					-.01	-.14 *	-.03	.07	.08	.20***	-.05	-.26 ***	-.05	.05	.01
(5) Actor motivation to migrate						-.02	-.08	-.06	-.14*	.00	.29***	.12*	-.04	-.03	.01
(6) Partner motivation to migrate							-.04	-.06	-.01	-.15*	.12*	.29 ***	-.01	-.06	.01
(7) Actor perceived discrimination								.30***	-.11*	-.07	-.28***	-.18 **	.05	.00	.04
(8) Partner perceived discrimination									-.06	-.15*	-.22 ***	-.26 ***	.07	.04	-.01
(9) Actor traditional values										.26***	.00	.04	.00	.00	.01
(10) Partner traditional values											.06	.01	-.01	.01	.02
(11) Actor migration-related psychological adaptation												.38***	-.11	-.05	-.04
(12) Partner migration-related psychological adaptation													-.08	-.06	-.03
(13) Age														.24***	.51***
(14) Life proportion in Canada															.36***
(15) Couple length															

Note. *** $p < .001$. ** $p < .01$, * $p < .05$ (2-tailed)..

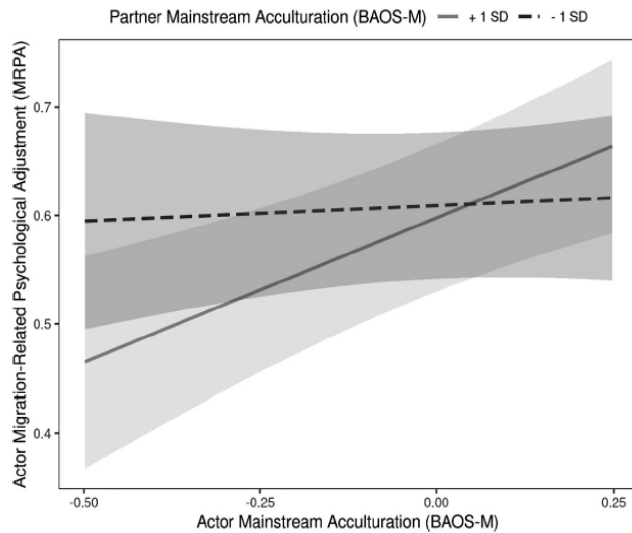
Table 2*Hierarchical mixed-effect regressions predicting actor's migration-related psychological adjustment.*

Predictor	Model 1		Model 2		Model 3		Model 4		Model 5	
	b (SE)	p	b (SE)	p	b (SE)	p	b (SE)	p	b [95% CI]	p
Intercept	.56*** (.05)	<.001	.44*** (.07)	<.001	.35*** (.11)	<.001	.33** (.10)	<.005	.31** (.11)	<.01
Sex	.03 (.02)	.05	.04* (.02)	.02	.03* (.02)	.03	.03* (.02)	.03	.04* [.00,.07]	.03
Proportion of life in Canada	-.13 (.25)	.60	-.02 (.22)	.94	.05 (.22)	.82	.06 (.22)	.77	.11 [-.32,.54]	.61
Children	.12** (.04)	.00	.10** (.04)	.01	.10* (.04)	.00	.10** (.03)	.00	.10* [.04,.17]	.00
Relationship length	.00 (.00)	.18	.00 (.00)	.31	.00 (.00)	.37	.00 (.00)	.44	.00 [-.00,.01]	.41
Actor mainstream acculturation			.16** (.05)	.00	.15** (.05)	.01	.16** (.05)	.00	.15** [.04,.25]	.01
Actor heritage acculturation			-.17*** (.04)	<.001	-.18*** (.04)	<.001	-.19*** (.04)	<.001	-.19*** [-.27, -.11]	<.001
Actor motivation to migrate			.21*** (.06)	<.001	.24*** (.06)	<.001	.26*** (.06)	<.001	.25*** [.12,.38]	<.001
Actor perceived discrimination			-.18*** (.04)	<.001	-.17*** (.04)	<.001	-.17*** (.04)	<.001	-.17*** [-.26, -.08]	<.001
Partner mainstream acculturation					-.04 (.05)	.44	-.03 (.05)	.55	-.03 [-.14,.07]	.56
Partner heritage acculturation					.02 (.04)	.69	.01 (.04)	.80	.00 [-.08,.08]	.96
Partner motivation to migrate					.10 (.06)	.11	.12 (.06)	.06	.13* [.00,.26]	.04
Partner perceived discrimination					-.14** (.04)	.00	-.13** (.04)	.00	-.12** [-.21, -.03]	.01
Mainstream acculturation gap							.65* (.29)	.03	.65* [.08,1.22]	.03
Heritage acculturation gap							-.39* (.17)	.03	-.42* [-.77, -.07]	.02
Actor traditional gender values									.05 [-.14,.25]	.60
Partner traditional gender values									.11 [-.09,.31]	.27
Interaction between partner traditional gender values and actor mainstream acculturation									-.87 [-1.95,.22]	.12
Interaction between partner traditional gender values and actor heritage acculturation									.56 [-.21,1.32]	.16
Residual variance	.02		.14		.16		.16		.18	
Intercept variance	.05		.39		.41		.46		.43	

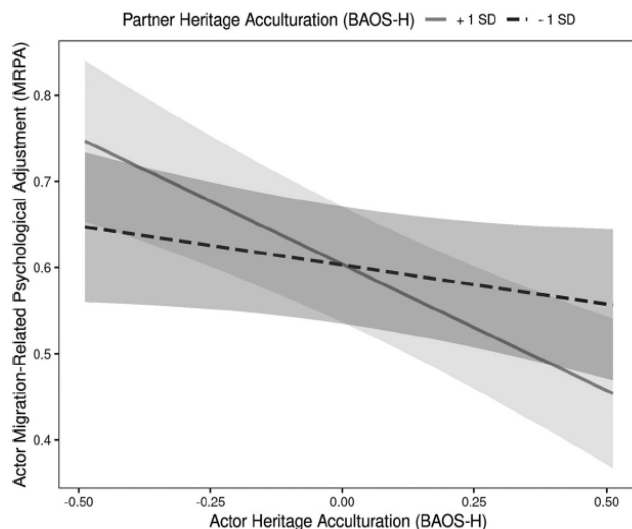
Note. CI = confidence interval; b = unstandardised coefficients. Continuous predictors are mean centred. * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1

Mainstream acculturation gaps and psychological adjustment.

**Figure 2**

Heritage acculturation gaps and psychological adjustment.



mean), actor's heritage acculturation is unrelated to his or her own psychological adaptation (unstandardised simple slope $b = -.09$, $p = .11$) – mirroring mainstream gap results. In contrast, when one's partner's heritage acculturation is high (one standard deviation above the mean), actor's heritage acculturation is negatively related to his–her own adjustment (unstandardised simple slope $b = -.29$, $p < .001$). The Johnson-Neyman interval indicates that this negative association between actor's heritage acculturation and adjustment starts be-

ing significant when partner's mean-centred heritage acculturation score is superior to $-.21$ (or $.88$ SD below the mean, with observed mean-centred values range $[-0.49, 0.51]$).

In short, having a partner who strongly adopts the mainstream culture amplifies the benefits of one's own mainstream cultural adoption in terms of adjustment, and having a partner who strongly retains the heritage culture amplifies the negative influence of one's own heritage cultural maintenance on adjustment. The introduction of acculturation gaps in Step 4 significantly increases model fit compared to less complex models ($\chi^2 = 8.93$, $df = 2$, $p = .01$), and accounts for 5.6% additional intercept variance.

Gender roles

Actor's and partner's gender role values, as well as interactions between actor's mainstream/ heritage acculturation and partner's gender role values, are unrelated to participants' psychological adaptation. The introduction of these variables in Step 5 does not increase model fit significantly ($\chi^2 = 5.43$, $df = 4$, $p = .25$) and accounts for 1.7% of additional residual variance.

Discussion

This study examined associations between psychological adaptation and traditional predictors – acculturation, motivation and ethnic discrimination – from an actor-partner perspective, in order to consider partner and couple acculturation effects. Participants' own motivation to migrate and mainstream acculturation were positively associated with their psychological adaptation, and their heritage acculturation and perceived discrimination were negatively associated with their psychological adaptation (actor effects). Their partner's motivation to migrate and perceived discrimination were respectively positively and negatively associated with participants' psychological adaptation (partner effects). Both mainstream and heritage acculturation gaps effects were present, with differential associations with migrants' psychological adaptation.

Actor effects on migration-related psychological adjustment

In line with past results (Berry 1997, 2005), we found that motivation to migrate and mainstream acculturation were positively associated with psychological adaptation, while perceived discrimination was negatively associated with it. However, contrary to our hypotheses, heritage acculturation was negatively associated with psychological adaptation. These results contrast with research contending that migrants scoring high on heritage AND mainstream acculturation reap the greatest benefits of adjustment (e.g. Berry 1997; Berry 2006; Phinney et al. 2001). Rather, our findings are consistent with studies revealing mixed results on

links between heritage acculturation and adaptation (Neto, Barros, and Schmitz 2005; Szapocznik, Kurtines, and Fernandez 1980; Ward and Kennedy 1994), including two older meta-analyses (Moyerman and Forman 1992; Rogler, Cortes, and Malgady 1991). For example, in a study with over 5000 acculturating teenagers, Berry (2006) found that only mainstream acculturation was positively related to psychological adjustment.

In the present study, participants' country of origin may help account for the negative association between heritage acculturation and psychological adaptation. Participants were French migrants to Quebec, two cultural contexts sharing several features because of their common historical roots and language (French settlers colonised Quebec in the seventeenth century). As a result of this colonial past, French migrants experience low cultural distance when settling in Quebec but may interpret French-Quebec cultural differences as deterioration of the 'real' French culture. Conversely, among Quebecers, French people have the reputation of being contemptuous and haughty (Dupuis 2004; Overmann 2008), a stereotype encapsulated in a culturally-specific derogatory label ('Maudits Français'). Individual migration is embedded in intergroup relations, and our results highlight the importance of considering these sociocultural and historical influences when examining individual adjustment.

Partner effects on migration-related psychological adjustment

Examining partner and couple effects on personal psychological adaptation was a novel feature of this research. Our results revealed that migrants whose partner was motivated to settle in the new country report greater psychological adjustment over and above their own motivation. This lasting effect of one's partner's initial motivation is consistent with other studies demonstrating that migration's initial conditions play a crucial role in influencing later trajectories of change (Doucerain et al. 2017). The mechanisms underlying this effect would need to be clarified. One possibility is that partner's motivation has a protective role when immigration-related obstacles arise. A migrant might experience less guilt and responsibility toward his/her partner when encountering difficulties if that partner was also motivated to migrate. This may allow the couple to support each other when facing difficulties, in turn leading to better individual psychological adjustment (Falconier et al. 2015). Future research should explore potential mediators of this association between partner's motivation and psychological adaptation, such as one's sense of responsibility for one's partner.

In addition, our results revealed that migrants whose partner is feeling discriminated against report worse psychological adjustment over and above their own perceived discrimination. This effect of partner's perceived discrimination is the first, to our knowledge, to establish the detrimental ef-

fect of indirect discrimination via migrants' romantic partner. The mechanisms underlying this effect would also need to be clarified. One possibility is that psychologically adjusting to an environment that disfavours and hurts a loved one is hard, thus limiting actor's psychological adaptation. This may lead also the partner to disengage and orient shared couples' activities away from the mainstream culture. Future research should explore potential mediators of this association between partner's perceived discrimination and psychological adaptation, such as one's sense of team with and protection of one's partner.

Couple effects on migration-related psychological adjustment

The present findings revealed that mainstream and heritage acculturation gaps between partners, operationalised as interactions between actor and partner scores, were both significantly associated with migrants' psychological adaptation. In the case of the mainstream culture, the association between migrants' acculturation and psychological adaptation became increasingly positive as their partner's acculturation increased. Moreover, when migrants reported low adoption of the mainstream culture, their psychological adaptation was higher with a partner whose mainstream acculturation was low as well, than with a partner whose mainstream acculturation was high. In short, mainstream acculturation gaps seem to be detrimental to migrants' individual psychological adaptation.

This result is consistent with the notion that personal and contextual forces impact migrants' psychological adjustment. Both partners' mainstream acculturation orientations shape the family's shared social space, be it in terms of activities they initiate, TV shows they watch or even meals they prepare. In the absence of gaps, partner's mainstream cultural contributions are congruent with actor's own mainstream acculturation choices. Partners may then have joint leisure activities and friends promoting mainstream acculturation, an alignment likely to foster their psychological adjustment. In contrast, when mainstream gaps are present cultural elements put forth by the partner may collide with actor's preferences and signal that she or he is out of place, a state that likely hinders psychological well-being.

Notably, the impact of acculturation gaps seemed particularly pronounced when actor mainstream acculturation was low. In such cases, having a high mainstream acculturation partner seems to lower the actor's psychological adaptation. A comparison effect may help explain this pattern. Migrants typically arrive in the new country motivated to adopt the mainstream cultural tradition. As such, a partner with high mainstream acculturation may embody someone who 'made it' and, by comparison, highlight actor's own struggles. In such cases, the actor may be unsatisfied with his or her own migration experience and feel misunderstood by his or her

partner, whose experience is very different. This acculturation gap may also lead to goal conflicts between partners in deciding how to divide their time between heritage- and mainstream-related cultural activities such as the choice of joint activities, friends, etc.

Our results revealed a very different pattern in the case of heritage acculturation. When migrants reported low heritage acculturation, their psychological adaptation was higher with a partner whose heritage acculturation was high than with a partner whose heritage acculturation was low as well. Combined with the finding that actor heritage acculturation was negatively associated with psychological adaptation, this indicates that couple alignment amplifies heritage acculturation's adverse influence, whereas couple gaps buffer it. Considering the couple as an acculturation unit may help explain these results.

Heritage gaps may serve psychological adaptation by enhancing complementarity within the couple unit. Heritage acculturation gaps may allow migrants to orient toward the new cultural environment while benefiting from their partner's connections with and investment in the heritage culture. (Spiegler, Leyendecker, and Kohl 2015). Similarly, the person invested in maintaining heritage cultural engagement may derive psychological adaptation from having a definite cultural maintenance role and fulfilling this cultural continuity responsibility for the couple unit. In contrast, if both partners are high on heritage acculturation, they may limit their social integration by becoming a couple of 'Maudits Français', negatively judging and criticising, and gradually disengaging the mainstream culture, hence limiting their individual psychological adaptation. If both are low on heritage acculturation, they may feel disconnected from their cultural roots, with similar negative effects.

In short, our results reveal different results in terms of the association between acculturation gaps and psychological adaptation – positive for the mainstream culture, negative for the heritage culture. This divergence reflects existing debates on the beneficial vs. detrimental association between acculturation gaps and psychological adaptation by showing that both positions may be warranted, depending on the culture in question. Our findings on mainstream gaps are consistent with past research presenting gaps as damaging to migrant couples (Ben-David and Lavée 1994; Cheung 2008; Cruz et al. 2014; Kanat-Maymon et al. 2016); whereas our findings on heritage gaps of the heritage acculturation are consistent with studies showing that gaps are helpful for migrant couples (Flores et al. 2004; Spasojević, Heffer, and Snyder 2000; Spiegler, Leyendecker, and Kohl 2015) – possibly through a couple-level complementarity mechanism.

Our results show that acculturation gaps between romantic partners are not problematic per se have important implications for migrants' psychological adaptation and how to practically support migrant couples in their post-migration

adaptation. Future research should explore how partner effects and acculturation gaps impact other individual outcomes, such as social adjustment, and how psychological adaptation-related couple dynamics are associated with romantic outcomes, such as relationship satisfaction or commitment

Gender role values and migration-related psychological adjustment

Based on past research (Kanat-Maymon et al. 2016; Kisselev, Brown, and Brown 2010), we had hypothesised that partner's greater endorsement of traditional gender role values combined with actor's strong mainstream acculturation would be related to lower actor psychological adaptation. Contrary to our expectation, this interaction was not statistically significant (neither were actor's and partner's gender role values). The present sample reported low traditional gender role values scores overall, leading to potential range restriction issues. Egalitarian gender role values are prevalent in the Quebec context and the cultural proximity between Quebec and French cultures may explain the present findings. Gender role values may not have been an immigration issue for French migrants who mostly arrived with values similar to those prevalent in the new country. In situations with the more cultural distance between mainstream and heritage cultures, a moderating role of gender role values may be more likely. Traditional gender role values might conflict with values and behaviours adopted via mainstream acculturation, causing friction in the couple and dissonance in migrants' identities, thus negatively impacting migrants' psychological adaptation. Future research using samples with the greater cultural distance between mainstream and heritage cultures in terms of gender role values should help clarify how such values affect the association between acculturation and psychological adaptation.

Strengths & limitations

By using a sample of French migrants to Quebec, this study controlled for language effects at the design level, allowing us to look at cultural adaptation outside of language proficiency considerations. Past research showed that language acculturation plays a predominant role (Kanat-Maymon et al. 2016; Kisselev, Brown, and Brown 2010), making it hard to disentangle the impact of other variables. However, this strength is also one of the study's weaknesses. A French sample makes the present results harder to generalise, in contrast to, for example, a multicultural sample. In addition, our sample was fairly recent in terms of how long they had been living in Canada. Thus, our results are more representative of the few years following arrival in the country than of later stages in migrants' acculturation. Second, the study's correlational design precludes any causality inference. Our decision to use psychological adaptation

as the dependent variable was grounded in dominant acculturation frameworks whereby heritage cultural maintenance and mainstream cultural adoption are thought to have downstream consequences on psychological and sociocultural adjustment (Berry 1997; Nguyen and Benet-Martínez 2013). However, it is also possible that being better adjusted psychologically would influence migrants' acculturation (Rudmin 2009). Future longitudinal research should shed light on effect directionality by measuring both general and migration-specific psychological adjustment. Third, the in-house, retrospective motivation measure is also a limitation, given that this measure has not been properly validated.

Conclusion

The present research heeded the call to study acculturation in its social context (Ward and Geeraert 2016) by focusing on the romantic context using an actor-partner interdependence framework. It also extended prior work on acculturation gaps within couples by considering individual-level outcomes, here migration-related psychological adaptation, rather than romantic outcomes. In addition, this research expanded the scope of studies on acculturating couples by also considering other important antecedents of psychological adaptation beyond acculturation, namely, motivation and discrimination. In addition, our results documented partner and couple effects, with the notable finding that mainstream and heritage acculturation gaps differentially affect migrants' psychological adaptation. These findings underscore the necessity to better understand how romantic relationship dynamics following migration play out in individual-level migration outcomes. Remembering that a substantial proportion of migrants settle in a new country with their partner and/or family, doing so is not only theoretically meaningful but also has substantial societal implications.

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