

Supplemental Material

Belonging nowhere: Marginalization and radicalization risk among Muslim immigrants

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Methods & Analysis

In this Supplemental Material, we provide a more detailed and technical report of our methods, analysis, and research findings.

Materials

The survey included questions about acculturation orientations (marginalization, assimilation, separation, and integration), experiences of discrimination, feelings of significance loss, and support for radicalism. We included two indicators of support for radicalism. The first measure included questions that assessed support for a radical interpretation of Islam. The second measure presented participants with a description of a hypothetical group that was modeled after attributes of extreme organizations. Participants were asked to indicate how much they thought people in their social circle would support the group.

Acculturation Measures

We used the Immigrant Acculturation Scale (Bourhis & Barrette, 2006) to measure integration, assimilation, separation, and marginalization. These items spoke to the

extent to which participants adhered to the customs and values of their heritage cultures as well as those of American society, with two items reflecting each acculturation style. Sample items include "I wish to maintain my heritage culture values and also adopt key features of American values" (integration, values), "I wish to maintain my heritage culture customs rather than adopt American customs" (assimilation, customs), "I wish to give up my heritage culture values for the sake of adopting American values" (separation, values), and "I do not wish to maintain my heritage culture values or adopt American values as I feel uncomfortable with both types of values" (marginalization, values).

The marginalization items were supplemented with two additional questions about the extent to which participants felt that they did not belong to any culture, because the two items from the Immigrant Acculturation Scale did not capture this aspect of marginalization. Given that our interviews suggested that one's identity as a Muslim is just as important as one's identity as a member of their heritage culture, one of these items was framed with respect to Muslim culture rather than the culture of the heritage country. These items were "There are times when I feel like I don't belong to any culture" and "Sometimes I don't feel part of American culture or part of Muslim culture." All items were measured on a six-point scale (marginalization, $\alpha = .68$; integration, $\alpha = .78$; assimilation, $\alpha = .78$; separation, $\alpha = .78$).

We also included one set of scales in which heritage identification and host culture identification were measured separately (Hogg & Hains, 1996; Hogg, Hains, & Mason, 1998; Hogg et al., 2007) so that we could categorize individuals as belonging to different acculturation orientations according to where they scored relative to the midpoint of the scale. We also had the option to analyze these host and heritage culture identity scales as representing assimilation and separation, respectively, and to create an interaction term to represent integration and marginalization. However, we could not use this measure because of ceiling effects, a known issue with this type of measurement (Arends, Tóth, & Van de Vijver, 2006).

Discrimination

We included an eight-item scale based on previous work on discrimination against Muslims (Fleischmann, Phalet, & Klein, 2011; $\alpha = .89$). Sample items include "Have you

ever experienced hostility or unfair treatment because of your religion?" and "Have you ever experienced hostility or unfair treatment because of your cultural background?" Items were measured on a five-point scale ranging from 1 = *never* to 5 = *all of the time*.

Significance Loss

We used the 24-item Need Threat Scale (Jamieson, Harkins, & Williams, 2010; Williams, 2009; Zadro, Williams, & Richardson, 2004) with subscales for belongingness, meaningful existence, control, and self-esteem, as these are all needs thought to be captured in the quest for significance. The scale was originally developed to measure reactions to playing a game called Cyberball, which is used in exclusion research, so we adapted the items to exclude game-specific wording and apply more generally to day-to-day life experiences. We removed one item from the control subscale, "Other players decided everything," because it did not clearly map onto a more general day-to-day life experience. In addition, we included four of our own items pertaining to humiliation, shame, hopelessness, and anger. These items were derived from interview responses as well as previous work on significance loss (Kruglanski et al., 2009). Participants were asked to indicate on a five-point scale how often they felt different states and emotions.

To explore the structure of the scale, we conducted principal axis factoring (PAF) analyses on the 27 items with direct oblimin rotation. PAF is a technique that allows shared variance among items, and direct oblimin rotation is used when factors may be related. This was an appropriate technique for our scale, as the subscales could theoretically be correlated. Our Kaiser's criterion was set for eigenvalues over one. We found that a single factor explained 47.8% of the variance in responses. We interpreted the first eight-item factor as representing significance loss. These items were "I feel ashamed," "I feel humiliated," "I feel rejected," "I feel meaningless," "I feel hopeless," "I feel like an outsider," "I feel nonexistent," and "I feel disconnected from other people" ($\alpha = .90$).

Data, Analysis, & Results

Supplemental Table 1 presents the scale means and standard deviations and Supplemental Table 2 shows the correlations across study variables. As would be expected from a general sample, overall support for radicalism was quite low.

Supplemental Table 1

Descriptive Statistics for Study Variables

	<i>M</i>	<i>SD</i>	<i>N</i>
Marginalization	2.72	1.03	198
Integration	4.96	0.95	198
Assimilation	1.79	0.85	198
Separation	2.99	1.25	198
Discrimination	2.41	0.76	198
Significance loss	1.61	0.73	198
Radical interpretation of Islam	2.13	0.74	198
Support for radical group	1.77	1.06	177

Note. The support for radical group measure was inserted shortly after data collection was already underway, hence the lower participant count.

Supplemental Table 2

Correlations Between Key Study Variables

Variable	1	2	3	4	5	6	7	8
1. Marginalization	—							
2. Integration	-.24**	—						
3. Assimilation	.18*	-.36**	—					
4. Separation	.15*	.05	-.10	—				
5. Discrimination	.22**	-.11	.04	.10	—			
6. Significance loss	.44*	-.27**	.17*	.15*	.48**	—		
7. Radical interpretation of Islam	.00	-.04	-.07	.42*	.24**	.17*	—	
8. Support for fundamentalist group	.04	-.16*	-.05	.08	.24**	.28**	.44**	—

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Moderated Mediation

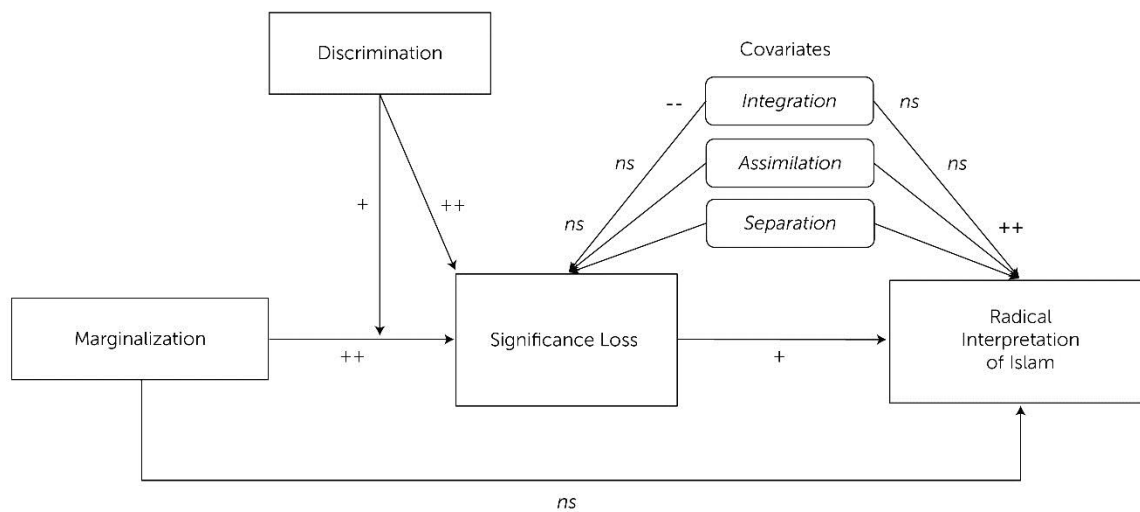
To test our hypothesis that marginalization predicts support for fundamentalist groups and radical causes, mediated by significance loss and exacerbated by discrimination, we used a moderated mediation analysis following the procedure outlined by Hayes (2012). Moderated mediation is a statistical approach that looks at how intermediary processes explain the relationship between two variables and how this relationship can change depending on the influence of additional variables. We ran these analyses to see if marginalization would influence feelings of significance loss and if experiences of discrimination would exacerbate feelings of significance loss for marginalized individuals. We then looked at whether feelings of significance loss would, in turn, be related to increased support for radicalization. We also included our measures of integration, assimilation, and separation in our model to isolate the unique role of marginalization. Although only the primary variables in the model are shown in the

figures, covariates were included in the path to the mediator as well as in the path to the outcome variable and are reported in the text.

We ran the analyses two separate times, once for each indicator of support for radicalism. We ran the analyses with 5,000 bootstrap samples to generate 95% confidence intervals for the conditional indirect effect. When the confidence intervals do not contain zero, the effect is considered significant. This is recommended over traditional significance testing, as significance tests do not respect the nonnormality of the sampling distribution of the indirect effect (Hayes, 2012). All variables were mean-centered to reduce the threat of multicollinearity in the interaction term. Supplemental Figures 1 and 2 depict the moderated mediation relationship for each indicator of support for radicalism, including unstandardized loadings with standard errors in parentheses.

Support for a radical interpretation of Islam. As predicted, marginalization predicted greater significance loss ($B = .21, SE = .04, p < .001$), as did discrimination ($B = .38, SE = .06, p < .001$). Moreover, the relationship between marginalization and significance loss became stronger the more one had experienced discrimination ($B = .17, SE = .05, p = .002$). In turn, significance loss predicted support for a radical interpretation of Islam ($B = .17, SE = .07, p = .03$). The confidence intervals suggested that marginalization indirectly related to support for a radical interpretation of Islam via significance loss when having experienced high levels of discrimination, 95% confidence interval (CI)[.0053, .1282].

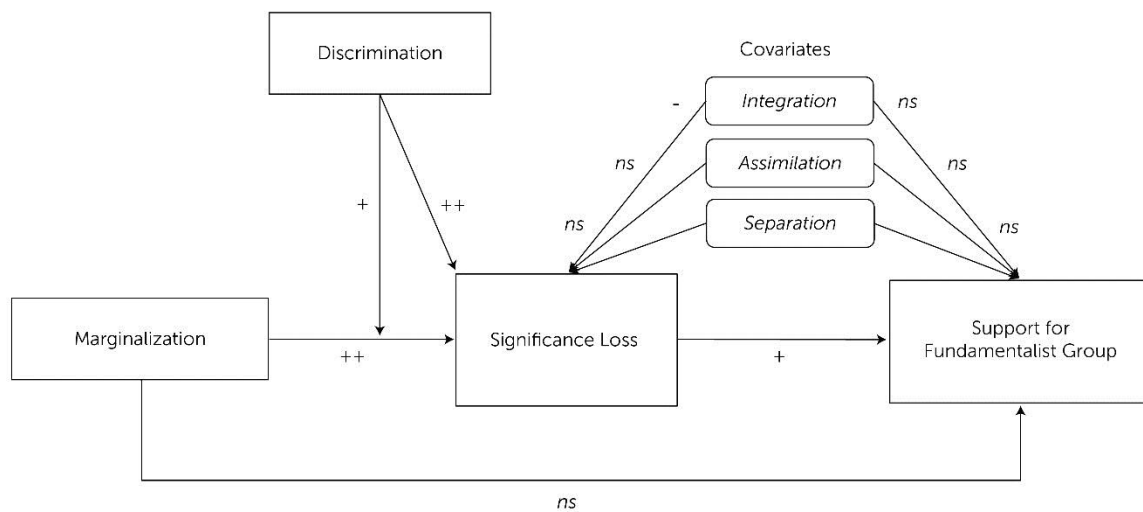
Figure 1. Model showing the effect of marginalization on support for a radical interpretation of Islam is not direct but occurs via significance loss. The effect of marginalization on significance loss is exacerbated by experiences of discrimination.



ns = the relationship between the variables was not significant; + = a significant positive relationship at the $p < .05$ level; ++ = a highly significant positive relationship at the $p < .001$ level. -- = a highly significant negative relationship.

Support for fundamentalist groups. Again, marginalization was related to greater feelings of significance loss ($B = .23$, $SE = .05$, $p < .001$), as was discrimination ($B = .40$, $SE = .06$, $p < .001$). The relationship between marginalization and significance loss became stronger the more one had experienced discrimination ($B = .15$, $SE = .06$, $p = .012$). In turn, significance loss predicted attraction to the group ($B = .43$, $SE = .12$, $p = .003$). The confidence intervals suggested that, in line with our predictions, marginalization was indirectly related to attraction to the group via significance loss under a high degree of discrimination, 95% CI [.0561, .3062].

Figure 2. Model showing the effect of marginalization on support for the fundamentalist group is not direct but occurs via significance loss. The effect of marginalization on significance loss is exacerbated by experiences of discrimination.



ns = the relationship between the variables was not significant; + = a significant positive relationship at the $p < .05$ level; - = a significant negative relationship; ++ = a highly significant positive relationship at the $p < .001$ level.

Other acculturation orientations. Although the focus for this research was the role of marginalization, we also looked at the implication of other acculturation orientations for radicalization. Controlling for the other variables in the model, we found that integration was associated with lower feelings of significance loss ($B = -.11$, $SE = .05$, $p = .03$) and separation was associated with increased risk for possessing a radical interpretation of Islam ($B = .24$, $SE = .04$, $p < .001$). Assimilation was unrelated to any of the variables of interest. Notably, marginalization was the only acculturation orientation that was related to increased significance loss.

Even though marginalization was the only acculturation orientation positively associated with significance loss, to fully explore the data, we tested interactions between the other acculturation orientations and discrimination to ascertain whether any of these orientations might become risk or protective factors under conditions of discrimination. Indeed, we found two notable interactions. Integration interacted with discrimination, such that discrimination was less predictive of significance loss as a function of greater integration ($B = -.17$, $SE = .05$, $p = .04$). Confidence intervals suggested a conditional indirect effect at average (95% CI [-.05, -.0004]) and high degrees of discrimination (95% CI [-.10, -.003]). Additionally, although separation alone did not predict significance

loss, it did interact with discrimination such that separation was associated with greater significance loss at high levels of discrimination ($B = .12$, $SE = .04$, $p = .005$), 95%CI [.0024, .06].

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