

# Relocation choice for different homophily preferences: hybrid scenarios for Schelling Model

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## **Annex A2: Asymmetric conditions: $\beta$ secondary as function of $\beta$ dominant**

The aim is to observe what difference occurs if liberal majority or liberal minority group hold  $\beta$  secondary (ethnic similarity preference) as function of  $\beta$  dominant (value similarity preference).  $\beta$  secondary is calculated as

$$\beta_{secondary} = \beta_{dominant} * w$$

with  $w \in [0, 1]$ . For  $w = 0$ ,  $\beta$  secondary is equal 0; for  $w = 1$ ,  $\beta$  secondary is equal to  $\beta$  dominant.

Model: e\_v\_rum\_secfdom.nlogo. Experiments in Behaviorspace secfdom\_asm\_ethlibmaj for  $\beta$  ethnic liberal majority, secfdom\_asm\_ethlibmin for  $\beta$  ethnic liberal minority. This option would expand/substitute what now is now Fig. 11 in the manuscript (Fig: 5 in the end): for each group-type, it compares baseline  $\beta$  ethnic = 0 for both liberals majority and liberals minority (equivalent to  $w = 0$  in the new model), to either liberals majority holding  $\beta$  ethnic =  $\beta$  value ( $w = 1$  in the new model), or liberals minority holding  $\beta$  ethnic =  $\beta$  value ( $w = 1$  in the new model)

Figg: from 1 to 4 here are from the new model ( $\beta$  ethnic =  $\beta$  value \*  $w$ ) showing for each group-type the effects of change in liberals majority preference (on the left, with  $\beta$  ethnic liberal minority = 0), and change in liberals minority (on the right, with  $\beta$  ethnic liberal majority = 0)

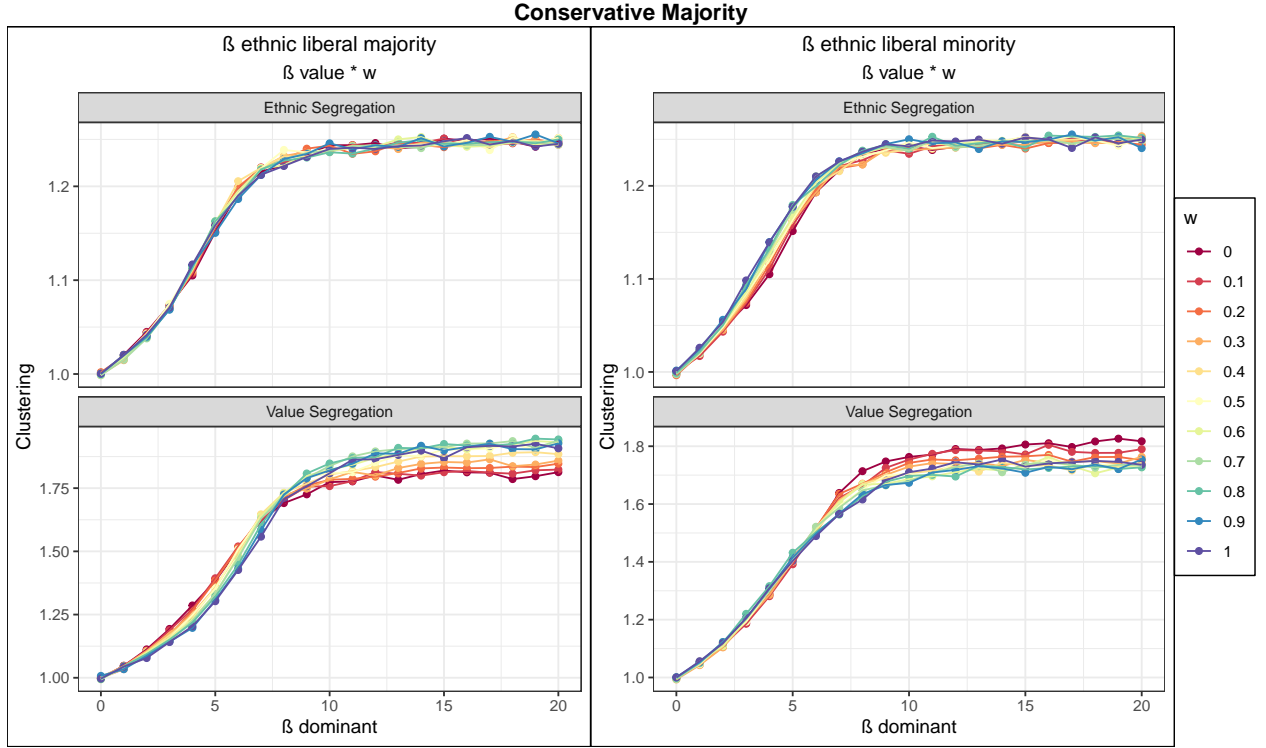


Figure 1: Effect of  $\beta$  ethnic liberal majority (left) and  $\beta$  ethnic liberal minority (right) on conservative majority

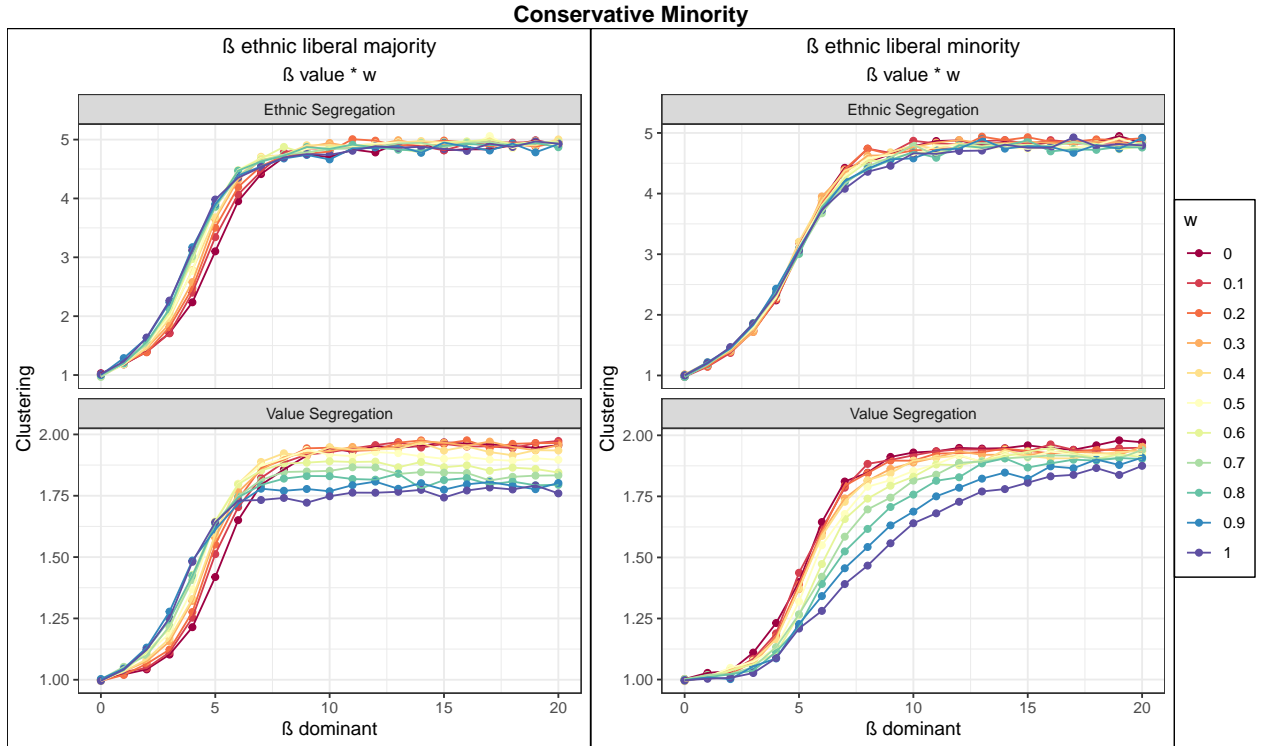


Figure 2: Effect of  $\beta$  ethnic liberal majority (left) and  $\beta$  ethnic liberal minority (right) on conservative minority

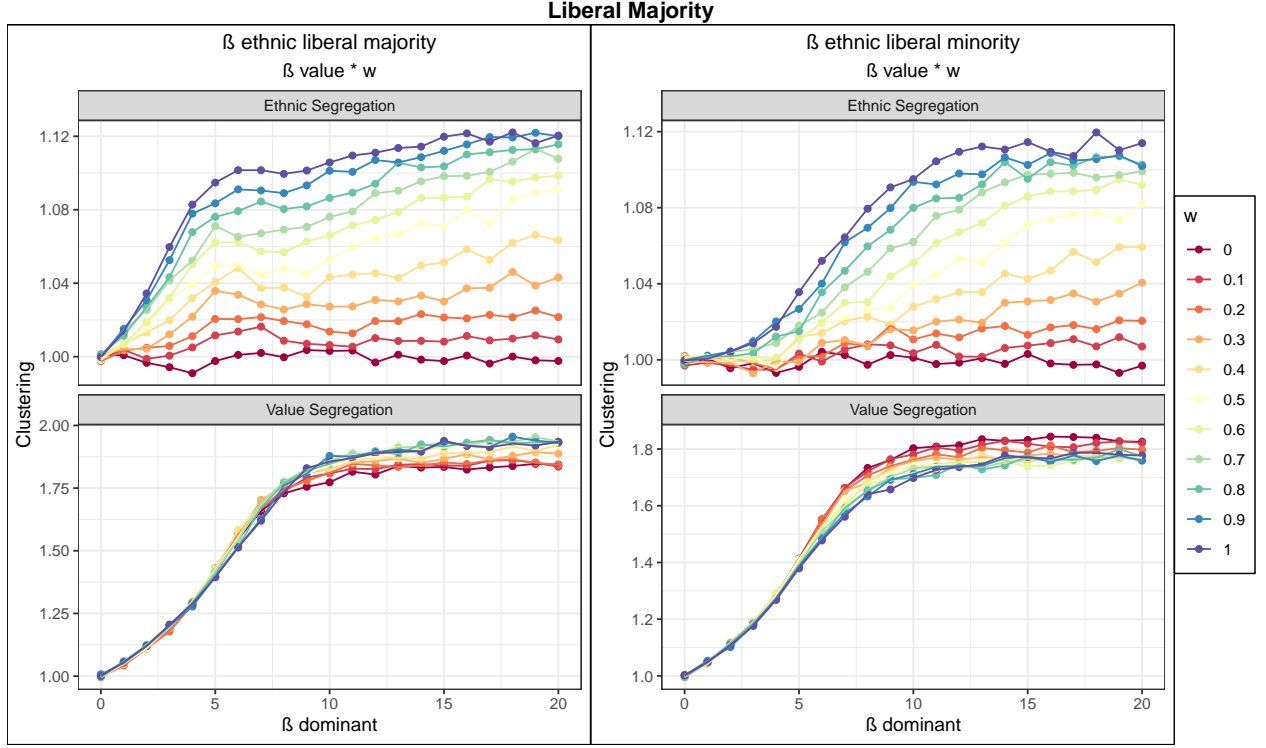


Figure 3: Effect of  $\beta$  ethnic liberal majority (left) and  $\beta$  ethnic liberal minority (right) on liberal majority

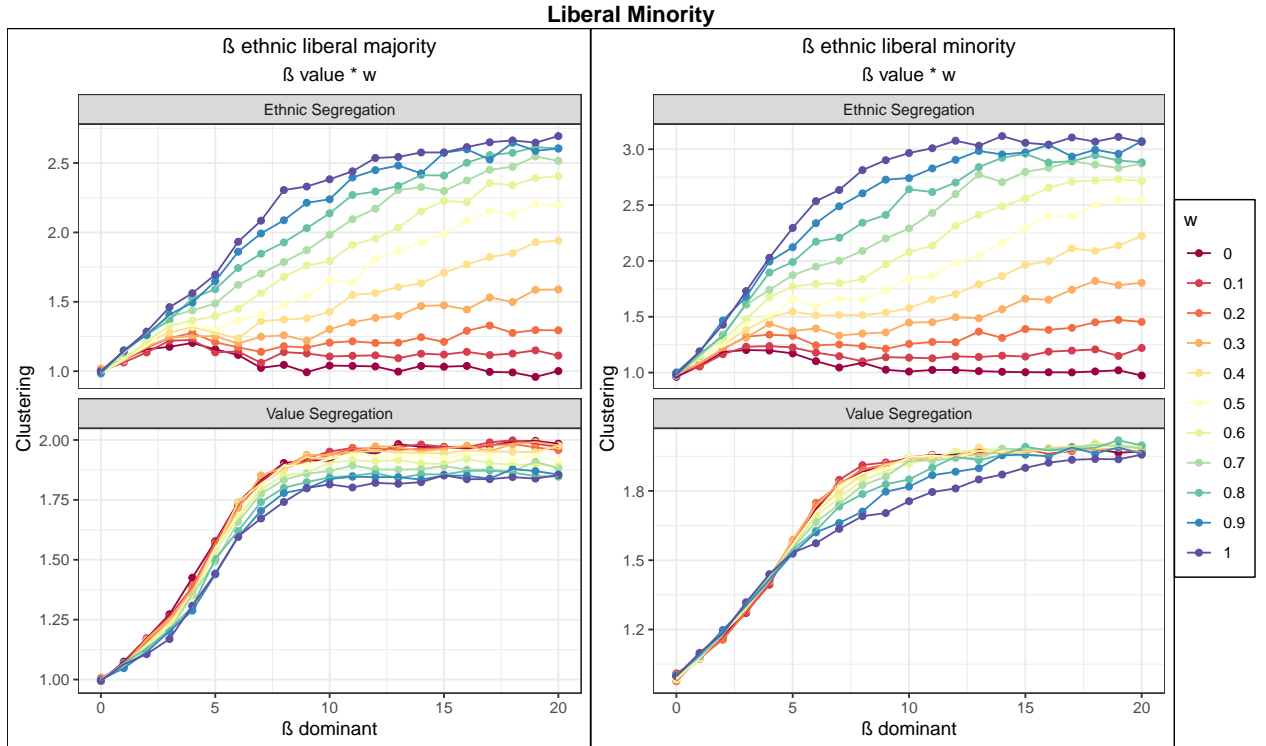


Figure 4: Effect of  $\beta$  ethnic liberal majority (left) and  $\beta$  ethnic liberal minority (right) on liberal minority

Current Fig. 11 in the manuscript we might change, equivalent to  $w = 0$  or  $w = 1$

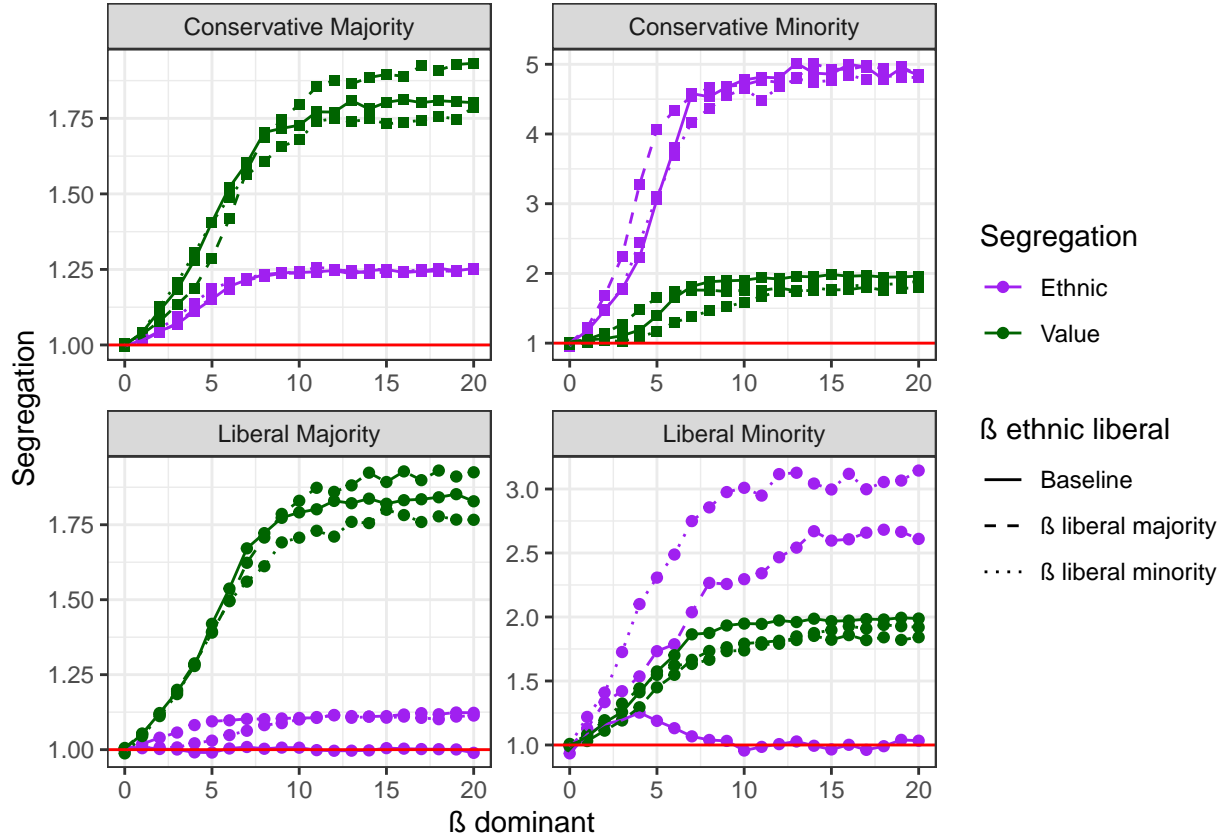


Figure 5: Ethnic asymmetric: effect of  $\beta$  ethnic of liberals (secondary) equal to  $\beta$  value liberals (dominant). x-axis: increase dominant preference for all agents (global parameter). Each panel reports segregation patterns of each group-type (ethnicXvalue). Linetype represents conditions compared: baseline: liberals of both ethnic groups hold only to dominant preference ( $\beta$  secondary = 0);  $\beta$  liberal majority = liberals majority hold same ethnic and value preference (liberals minority hold only to value preference),  $\beta$  liberal minority = liberals minority hold same ethnic and value preference (liberals majority hold only to value preference)