

Ben-Nun Bloom, P., & Bagno-Moldavsky, O. The conditional effect of network diversity and values on tolerance. *Political Behavior*.

ONLINE APPENDIX

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Appendix A. Cross-Country Levels of Diversity

While direct measures of exposure to disagreement in Israel are unavailable in current comparative datasets, we utilized proxy measures of diversity from the 2002 wave of the European Social Survey (ESS) that allow comparing the level of heterogeneity in Israel to that of other countries. The three relevant items included in the immigration module in ESS 2002 were: (1) “Do you have any friends who have come to live in [country] from another country?” (1-3, 3: Yes, several); (2) “Do you have any colleagues at work who have come to live in [country] from another country?” (1-3, 3: Yes, several); (3) “How would you describe the area where you currently live?” (1-3, 3: Many minority races/ethnic groups).

Figure A1 below presents frequencies from these three items, as well as a total scale. As can be seen in the figure, Israelis report more frequent interactions with immigrants as colleagues and friends and a higher share of ethnic minorities in their neighborhoods compared to citizens of most other democracies, indicating a relatively high exposure to diversity.

Figure A1. Diversity in Israel Relative to Other Democracies, WVS 2002

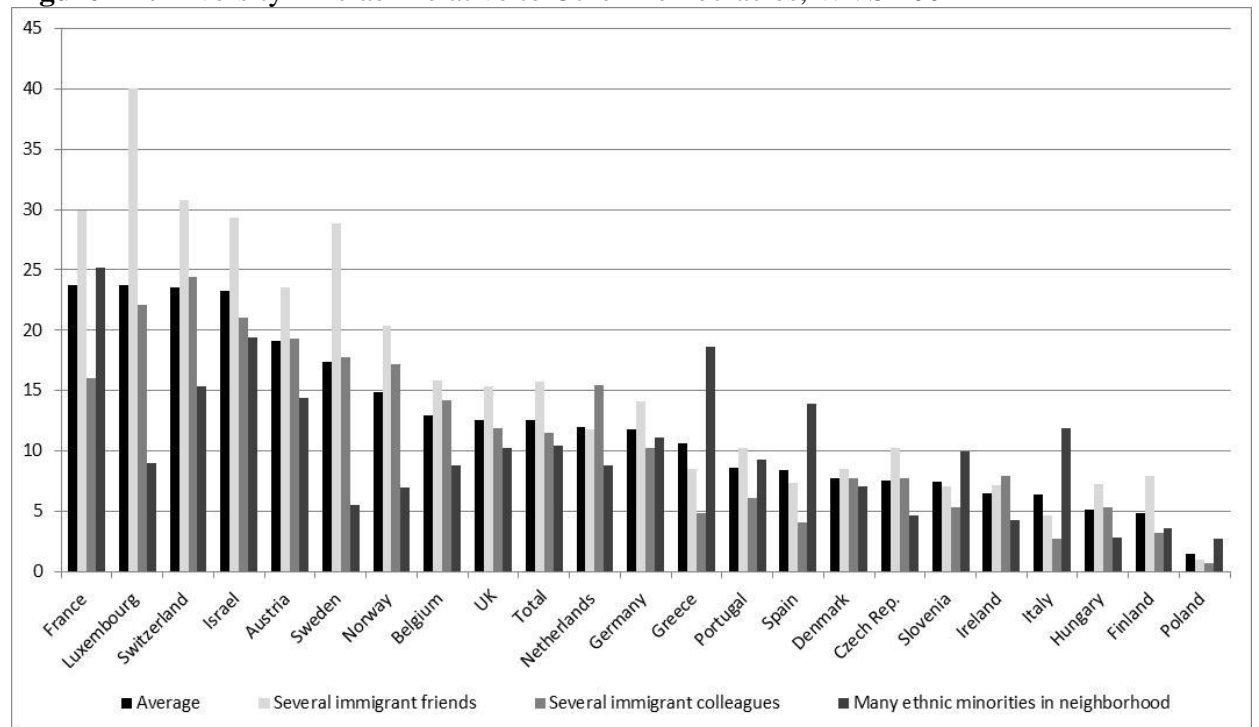


Table entries are frequencies.

Appendix B. Survey Methodology, Measurement and Descriptive Statistics

Survey methodology

The survey was conducted by the B.I. and Lucille Cohen Institute at Tel-Aviv University on March 2011. Sampling was based on random samples drawn from telephone listings, with separate strata for Jews (n=500) and Arabs (n=112). The telephone interviews were conducted among individuals 18 years and over in Hebrew, Russian (immigrants from the USSR) and Arabic (Arabs). The sample data were representative of the Israeli adult population in terms of age groupings, the immigrant population from the former Soviet Union, and ultra-Orthodox and ordinarily religious Jews, and slightly overrepresented females and people with a higher level of education. Up to five contact attempts were made at each household phone number. The response rate was 29% for the Jewish and 30% for the Arab strata, respectively (cf. the Pew Research report below,¹ showing that the response rate of a typical telephone survey was 9% in 2012). This paper focused on the Jewish respondents, except for the robust analysis presented in Online Appendix C below.

Measures of Tolerance

(1a) *Political tolerance towards least-liked groups*. This measure uses a content-controlled technique developed in the 1970s by Sullivan and colleagues (Sullivan, Piereson, and Marcus, 1982). This approach focuses on the willingness to accord political and civil rights to groups that constitute a threat in the eyes of the respondent or of whose behavior he or she disapproves. Respondents were presented with a list of potential target groups, and asked to select the group they liked the least, or tell the interviewer the name of another group they liked even less than those on the list. Once having identified their least-liked group, respondents were asked seven 5-point-scale questions regarding their willingness to extend to the group common political and civil rights, and responses were indexed on the political tolerance scale: “To what extent do you agree or disagree with each of the following statements regarding [one's least liked group]?”: “A member of [LLG] should be banned from being Prime Minister in Israel”; “The [LLG] should be outlawed”; “Members of the [LLG] should be allowed to appear on television”; “The [LLG] should have their phones tapped”; “Members of the [LLG] should be allowed to hold demonstrations”; “Members of [LLG] should be banned from voting for the Knesset”; “Members of [LLG] should be banned from being elected to the Knesset.” Answers were coded to range from definitely agree to definitely disagree ($\alpha=.805$). (1b) *Political tolerance towards Arabs*: The second political tolerance measure repeated the seven items above for a predefined group, Palestinian Arab citizens of Israel, for all Jewish respondents (see Stouffer 1955). This group was chosen because it is the most common target of intolerance in Israel, being at the focus of the Israeli-Arab conflict (Sullivan et al. 1985; $\alpha=.739$). (2a) *Social tolerance towards least-liked groups*: Social tolerance was measured for the same target groups (the content-controlled group and the predefined group of Israeli Arabs) and scales, while the questions pertained to willingness to tolerate close social contacts with the members of these groups: “I would be irritated if a member of [LLG] were my neighbor”; “I would not be pleased if my daughter or son were dating a member of [LLG]” ($\alpha=.640$). (2b) *Social tolerance towards Arabs*: The same two items, specifically referring to Arabs ($\alpha=.384$).

¹ For the report, see <http://www.people-press.org/2012/05/15/assessing-the-representativeness-of-public-opinion-surveys/>

Measures of Diversity

Exposure to political disagreement was measured using the “discussant generator” method (see Ikeda and Richey 2009; Mutz 2002b). Participants were presented with a brief definition of a social network as including people with whom one regularly discusses politics. Respondents were then asked to list the first names (or the first letter in the first name) of four of their network members. Two items recorded the extent to which respondents agreed or disagreed with the views of each of their discussants (“Would you say that your political views are...?”; from very different to very similar, 4 point scale; “When you talk to this person about political matters, how often do you agree?”; from usually to never, 4 point scale). Each of the items was coded such that heterogeneity was high on the measure, averaged for all reported network members and scaled to vary 0-1. A third item tapped the ideological preferences of each discussant on a 7-point scale as perceived by the respondent, and a scale was composed by taking the absolute difference between the participant’s reported ideology and each network member’s attitude, averaging the differences across all reported network members, and normalizing the index to vary 0-1. Finally, the three scales were averaged.

Measures of Values

Working on the European Social Survey (ESS) project, Schwartz offered a substantial reduction of the scale to 21 items, which proved to be a valid and effective substitute for the original 57-item scale. In this project we further reduced the scale to 10 items that proved to (1) be more suitable for telephone interviews compared to the original PVQ; (2) largely replicate the structure of the original scale in multidimensional scale analysis; (3) replicate the direction and strength of correlations with exogenous concepts applied for the validation of the original scale and with the reduced scale offered by Schwartz to the ESS (age, education, religiosity, political preferences, party affiliation, gender, and use of the Internet).

The PVQ includes 10 verbal portraits of different people matched to the respondents’ gender, each describing a person’s goals, aspirations, or wishes that point implicitly to the importance of a value. For example, “It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.” This describes a person who holds universalist values to be important. For each portrait, respondents indicated how similar the person is to themselves on a scale ranging from “very much like me” (6) to “not like me at all” (1). Respondents’ own values were inferred from the implicit values of the people they described as similar to themselves.

Schwartz (1992) constructed a hierarchy representing the values that can be considered universally important, because these values express fundamental motivational goals that reflect existential needs and that, in turn, can be related theoretically to potentially any attitude. Values that are positioned opposite each other across the hub (e.g., self-enhancement versus self-transcendence and openness to experience versus conservation) were construed as contradictory. These are values underlying individual attitudes in the social and political domains. See Online Appendix D below for further empirical details and scale validation.

Table A1. Descriptive Statistics of Exposure to Disagreement

| | Mean | St. dev | Min | Max | N | t-tests |
|------------------------|-------------|----------------|------------|------------|----------|--|
| Entire Jewish sample | .321 | .185 | 0 | 1 | 340 | - |
| Political right | .309 | .199 | 0 | .889 | 148 | $t_{(\text{right-left})}=1.894,$ $p=.059;$ $t_{(\text{right-center})}=.071,$ $p=.943;$ $t_{(\text{center-left})}=2.043,$ $p=.042$ |
| Political center | .311 | .151 | 0 | .917 | 113 | |
| Political left | .358 | .200 | 0 | 1 | 79 | |
| Openness to experience | .317 | .187 | 0 | 1 | 149 | $t=.002,$ $p=.999$ |
| Conservation | .317 | .183 | 0 | .917 | 154 | |
| Self-enhancement | .317 | .189 | 0 | 1 | 139 | $t=.334,$ $p=.739$ |
| Self-transcendence | .311 | .176 | 0 | .917 | 165 | |
| Religious | .308 | .194 | 0 | .917 | 114 | $t=1.006,$ $p=.315$ |
| Non-religious | .330 | .181 | 0 | 1 | 224 | |

Table entries are means, standard deviation, minimum, and maximum on scales varying from 0-1; two-tail t tests compared the mean of exposure to disagreement for the different groups; for the purpose of mean comparison, the values and religiosity measures were split at the middle point (.5), the ideology measure was split into three parts: under the middle point, the middle point, and above the middle point, and the values were split at the mean (.588 for conservation vs. openness and .633 for self-transcendence vs. self-enhancement).

Table A2. Descriptive Statistics of Intergroup Contact

| | Mean | St. dev | Min | Max | N | t-tests |
|------------------------|------|---------|-----|-----|-----|---|
| Entire Jewish sample | .235 | .306 | 0 | 1 | 474 | - |
| Political right | .226 | .295 | 0 | 1 | 146 | $t_{(\text{right-left})}=1.134,$ $p=.258;$ $t_{(\text{right-center})}=.833,$ $p=.406;$ $t_{(\text{center-left})}=.379,$ $p=.705$ |
| Political center | .245 | .313 | 0 | 1 | 109 | |
| Political left | .245 | .291 | 0 | 1 | 79 | |
| Openness to experience | .258 | .309 | 0 | 1 | 203 | $t=1.270,$ $p=.205$ |
| Conservation | .220 | .305 | 0 | 1 | 214 | |
| Self-enhancement | .210 | .286 | 0 | 1 | 200 | $t=1.840,$ $p=.067$ |
| Self-transcendence | .265 | .324 | 0 | 1 | 224 | |
| Religious | .216 | .308 | 0 | 1 | 145 | $t=.892,$ $p=.373$ |
| Non-religious | .243 | .305 | 0 | 1 | 326 | |

Table entries are means, standard deviation, minimum, and maximum on scales varying from 0-1; two-tail t tests compared the mean of intergroup contact for the different groups; for the purpose of mean comparison, the values and religiosity measures were split at the middle point (.5), and the ideology measure was split into three parts: under the middle point, the middle point, and above the middle point, while the values were split at the mean (.588 for conservation vs. openness and .633 for self-transcendence vs. self-enhancement).

Table A3. Descriptive statistics

| | Mean | St. dev | Min | Max | N |
|---|-------------|----------------|------------|------------|----------|
| Social tolerance – least-liked group | .431 | .343 | 0 | 1 | 388 |
| Political tolerance – least-liked group | .499 | .264 | 0 | 1 | 388 |
| Social tolerance – Arabs | .388 | .286 | 0 | 1 | 475 |
| Political tolerance – Arabs | .549 | .228 | 0 | 1 | 473 |
| Exposure to disagreement | .321 | .185 | 0 | 1 | 340 |
| Intergroup contact | .235 | .306 | 0 | 1 | 474 |
| Conservation vs. openness | .588 | .153 | 0 | 1 | 435 |
| Self-transcendence vs. enhancement | .633 | .152 | 0.1 | 1 | 442 |
| Abstract tolerance | .754 | .219 | 0 | 1 | 456 |
| Discussing politics | .514 | .330 | 0 | 1 | 499 |
| Ideology | .419 | .275 | 0 | 1 | 454 |
| Religious | .391 | .305 | 0 | 1 | 492 |
| Education | .587 | .233 | 0 | 1 | 498 |
| Income | .564 | .315 | 0 | 1 | 435 |
| Parent | .714 | .452 | 0 | 1 | 493 |
| Male | .478 | .500 | 0 | 1 | 500 |
| Age group | .501 | .322 | 0 | 1 | 500 |
| Network size | 2.574 | 1.238 | 1 | 4 | 343 |
| Least-liked group – right vs. left | .660 | .474 | 0 | 1 | 388 |
| Threat of least-liked group | .575 | .338 | 0 | 1 | 382 |
| Threat of Arabs | .561 | .351 | 0 | 1 | 462 |

Table entries are means, standard deviation, minimum, and maximum on scales varying from 0-1.

Appendix C. Robust Analysis

Table A4. Tolerance towards Least-Liked Group and towards Arabs – Multiple Imputation

| | Social tolerance-LLG | | | Political tolerance-LLG | | | Social tolerance-Arabs | | | Political tolerance-Arabs | | |
|------------------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|---------------------------|------------------------|------------------------|
| | I | II | III | I | II | III | I | II | III | I | II | III |
| Exposure to disagreement | .186 (.101)* | - | .331 (.523) | .048 (.073) | - | .294 (.377) | .063 (.073) | - | .565 (.406) | -.034 (.056) | - | .183 (.305) |
| Cross-group contact | -.032 (.053) | - | .359 (.310) | .046 (.039) | - | .224 (.230) | .145 (.038) | - | .602 (.219) | .160 (.028) | - | .441 (.158) |
| Conservation vs. openness | - | -.021 (.120) | .392 (.231)* | - | -.009 (.087) | .362 (.168)** | - | -.184 (.086)** | -.064 (.182) | -.091 (.063) | -.119 (.065)* | .020 (.135) |
| Self-transcendence vs. enhancement | - | -.046 (.126) | -.247 (.250) | - | .042 (.092) | -.137 (.188) | - | .038 (.091) | .336 (.189)** | .118 (.066)* | .143 (.067)** | .213 (.146) |
| Disagreement* conservation | - | - | -1.602 (.738)** | - | - | -1.019 (.529)** | - | - | .402 (.572) | - | - | -.092 (.434) |
| Disagreement* transcendence | - | - | 1.233 (.757)* | - | - | .546 (.559) | - | - | -1.141 (.567)** | - | - | -.263 (.427) |
| Contact* conservation | - | - | -.013 (.411) | - | - | -.392 (.297) | - | - | -1.068 (.283) | - | - | -.405 (.209) |
| Contact* transcendence | - | - | -.606 (.438) | - | - | .081 (.329) | - | - | .236 (.308) | - | - | -.075 (.223) |
| Abstract democratic norms | .292 (.075) *** | .291 (.077) *** | .281 (.077) *** | .310 (.055) *** | .304 (.056) *** | .302 (.057) *** | .094 (.054) * | .089 (.055) ** | .117 (.055) ** | .209 (.041) *** | .211 (.042) *** | .221 (.041) *** |
| Threat – LLG | -.204 (.051) *** | -.220 (.051) *** | -.183 (.052) *** | -.230 (.038) *** | -.230 (.037) *** | -.222 (.038) *** | -.013 (.041) *** | .000 (.041) *** | -.009 (.041) *** | -.075 (.031) ** | -.055 (.030) * | -.071 (.031) ** |
| Threat – Arabs | -.120 (.052) ** | -.115 (.052) ** | -.124 (.053) ** | -.055 (.038) ** | -.060 (.038) ** | -.066 (.038) * | -.339 (.035) *** | -.354 (.035) *** | -.348 (.035) *** | -.242 (.027) *** | -.256 (.027) *** | -.245 (.027) *** |
| Ideology | -.006 (.063) | -.004 (.064) | -.011 (.066) | .020 (.046) | .021 (.046) | -.006 (.048) | .093 (.044)** | .102 (.045)** | .066 (.045) | .071 (.033)** | .077 (.034)** | .059 (.034)* |
| Religiosity | -.097 (.062) | -.107 (.062) * | -.104 (.062) * | .030 (.045) | .025 (.045) | .015 (.045) | -.173 (.041) *** | -.160 (.042) *** | -.163 (.041) *** | -.025 (.031) | -.022 (.032) | -.029 (.032) |
| Education | -.003 (.069) | -.003 (.070) | .007 (.070) | .079 (.051) | .072 (.051) | .066 (.052) | .108 (.050)** | .098 (.051)* | .087 (.050)* | .088 (.038)** | .087 (.039)** | .086 (.038)** |
| Income | .137 (.061) ** | .140 (.062) ** | .148 (.061) ** | -.014 (.045) | -.020 (.046) | -.019 (.046) | .134 (.042) *** | .125 (.043) *** | .128 (.043) *** | -.030 (.033) | -.036 (.034) | -.031 (.033) |
| Discussing politics | -.062 (.054) | -.059 (.054) | -.057 (.054) | .050 (.039) | .059 (.039) | .053 (.040) | -.087 (.039)** | -.061 (.039) | -.090 (.038)** | .022 (.029) | .044 (.029) | .021 (.029) |
| Parent | -.006 (.038) | .001 (.038) | -.004 (.038) | -.028 (.028) | -.025 (.028) | -.032 (.028) | -.011 (.027) | -.001 (.027) | -.012 (.026) | .039 (.020)* | .047 (.021)** | .034 (.020)* |
| Male | -.048 (.032) | -.048 (.032) | -.047 (.032) | .007 (.023) | .008 (.024) | .004 (.024) | .025 (.022) | .021 (.023) | .016 (.022) | .039 (.017)** | .041 (.018)** | .039 (.017)** |
| Age group | .004 (.053) | .010 (.055) | .015 (.054) | .009 (.039) | .006 (.040) | .006 (.040) | .037 (.037) | .050 (.039) | .040 (.038) | .105 (.029)** | .103 (.030)** | .105 (.029)** |
| Network size | .001 (.011) | .000 (.011) | .000 (.011) | .004 (.008) | .004 (.008) | .004 (.008) | .007 (.008) | .003 (.008) | .007 (.008) | -.005 (.006) | -.007 (.006) | -.005 (.006) |
| LLG – left vs. right | -.137 (.038) *** | -.135 (.039) *** | -.141 (.039) *** | -.098 (.028) *** | -.097 (.028) *** | -.102 (.028) *** | - | - | - | - | - | - |
| Constant | .454 (.127) *** | .548 (.134) *** | .377 (.198) * | .374 (.093) *** | .392 (.099) *** | .292 (.146) ** | .352 (.090) *** | .480 (.096) *** | .185 (.150) | .359 (.076) *** | .367 (.073) *** | .236 (.116) ** |
| N | 371 | 371 | 371 | 370 | 370 | 370 | 444 | 444 | 444 | 444 | 444 | 444 |
| AIC | 421.238 | 426.194 | 422.329 | 188.784 | 191.461 | 191.386 | 266.941 | 279.683 | 246.546 | 10.545 | 39.885 | 9.834 |
| BIC | 495.646 | 500.602 | 520.234 | 263.141 | 265.817 | 289.223 | 340.666 | 353.408 | 344.846 | 92.462 | 113.610 | 108.134 |

Multiple imputation (MI) was generated using Maximum Likelihood in Mplus Version 6. All variables in the analysis were included in the imputation, as per Graham (2009). *** 99%, ** 95%, * 90%.

Table A5. Tolerance towards Least-Liked Group – among Israeli Arabs

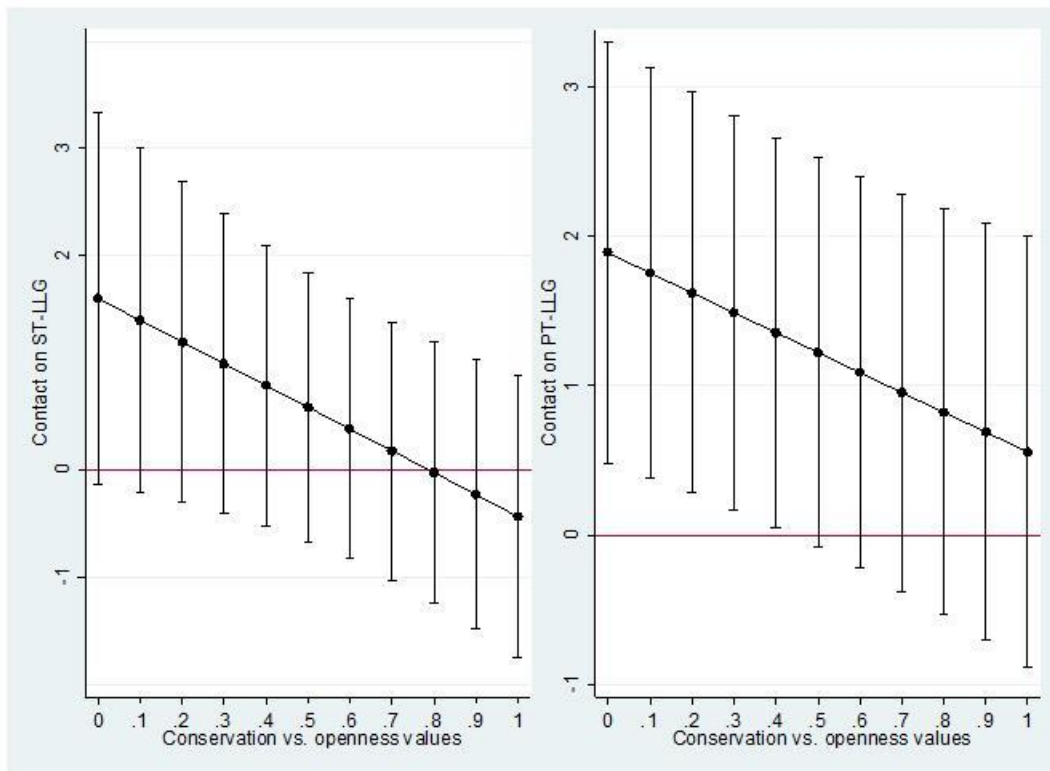
| | Social tolerance- LLG | | | Political tolerance- LLG | | |
|------------------------------------|-----------------------|-----------------|------------------|--------------------------|-----------------|------------------|
| | I _a | II _a | III _a | I _b | II _b | III _b |
| Exposure to disagreement | .279 (.306) | - | -3.026 (1.679)* | .115 (.262) | - | .704 (1.078) |
| Intergroup contact with Jews | .341 (.138)** | | 1.601 (.855)* | .150 (.096) | | 1.891 (.698)*** |
| Conservation vs. openness | - | -.174 (.546) | .247 (1.203) | - | -.336 (.356) | .962 (.847) |
| Self-transcendence vs. enhancement | - | .195 (.418) | -.185 (1.137) | - | -.278 (.219) | .510 (.577) |
| Disagreement* conservation | - | - | 4.249 (2.956) | - | - | -1.061 (1.909) |
| Disagreement* transcendence | - | - | 1.161 (2.315) | - | - | .238 (1.920) |
| Contact* conservation | | | -2.035 (.892)** | | | -1.337 (.575)** |
| Contact* transcendence | | | .040 (.888) | | | -1.513 (.972) |
| Abstract democratic norms | .788 (.446)* | .549 (.386) | .588 (.484) | .259 (.302) | .184 (.235) | .244 (.317) |
| Threat – LLG | -.508 (.210)** | -.277 (.203) | -.407 (.244) | -.130 (.123) | -.139 (.120) | -.108 (.158) |
| Ideology | -.256 (.259) | -.421 (.204)** | -.361 (.287) | -.044 (.141) | -.059 (.119) | -.024 (.141) |
| Religiosity | .034 (.245) | -.220 (.201) | -.045 (.257) | .026 (.152) | .050 (.089) | .107 (.145) |
| Education | .270 (.274) | .333 (.250) | .131 (.254) | .053 (.179) | .118 (.145) | -.028 (.191) |
| Income | .185 (.205) | .127 (.185) | -.000 (.235) | -.022 (.147) | .049 (.127) | -.017 (.187) |
| Discussing politics | .297 (.194) | .210 (.180) | .310 (.219) | -.098 (.141) | -.005 (.118) | -.074 (.141) |
| Parent | -.118 (.111) | -.158 (.116) | -.169 (.138) | -.007 (.084) | .020 (.067) | -.026 (.100) |
| Male | .075 (.113) | .049 (.103) | .034 (.121) | -.072 (.078) | -.039 (.065) | -.096 (.073) |
| Age group | -.090 (.179) | .078 (.201) | -.234 (.210) | -.043 (.157) | .076 (.131) | .047 (.177) |
| Network size | -.089 (.042)** | -.111 (.033)*** | -.102 (.046) | .003 (.031) | -.011 (.025) | -.010 (.031) |
| LLG – left vs. right | -.054 (.153) | .076 (.144) | -.146 (.205) | -.055 (.072) | .021 (.056) | .001 (.089) |
| Constant | -.248 (.671) | .395 (.585) | .255 (1.171) | .376 (.508) | .750 (.345)** | -.588 (.512) |
| N | 54 | 66 | 54 | 55 | 67 | 55 |
| R ² | 41.66% | 30.65% | 51.18% | 14.12% | 10.39% | 36.44% |

Table entries are unstandardized OLS coefficients, robust standard errors in brackets. *** two-tail 99% confidence level, ** two-tail 95%, * one-tail 95%.

Note that Israeli-Arabs were not presented with the battery measuring tolerance towards Arabs.

The *cross-group contact with Jews* indicator was identical to the measure of contact with Arabs, replacing “Arabs” with “Jews” where applicable.

Figure A2. The Interactive Effect of Intergroup Contact and Conservation Values on Tolerance towards One's Least-Liked Group – among Israeli Arabs



Average marginal effects with 95% Confidence Intervals. 1=conservation values (0= openness).

Robust analysis: The effect of network diversity and values on tolerance among Israeli Arabs

To examine the effect of network diversity and personal values in the Israeli Arabs subsample, social and political tolerance towards the least-liked group (note that Israeli Arabs were not presented with the battery measuring tolerance towards Arabs) were regressed on exposure to disagreement and intergroup contact with Jews (Model I), on the individual values of conservation and self-transcendence (Model II), and on the interactions between individual values and each of the two measures of network diversity (Model III), as well as on a set of control variables. Results are presented in Table A5.

First, Model I shows that contact with Jews significantly increases social tolerance towards one's least liked groups ($p=.018$). Holding all else constant, moving from no contact with Jews to having Jewish friends increases social tolerance by over a third of its range. The effect of contact with Jews approaches statistical significance for political tolerance towards one's least-liked groups ($p=.125$).

The effect sizes of contact with Jews, increasing a third and a sixth of the range in social and political tolerance towards one's least-liked group, are comparable to those reported for tolerance toward one's least-liked group in the Jewish sample (cf. Table 1). However, some differences emerged between the two sub-samples. First, in the Jewish sample exposure to disagreement, rather than contact with Arabs, generated the effect on tolerance toward one's least-liked group. We see three reasons for this difference between the Jewish and Arab samples. First, exposure to political disagreement among the Arab public is relatively more moderate than among Jews. While the Jewish public in Israel is characterized by a fierce ideological debate between right and left regarding the Israeli-Arab conflict, the essence of the democratic order, the role of religion, and other divisive issues, Arab public opinion is relatively truncated, representing mostly extreme left-wing opinions. Secondly, about 94% of the groups that were least-liked by Arabs respondents are Jewish. Accordingly, the measures of tolerance towards one's least-liked group are to a large extent directed towards a social majority group and are thus more similar to the tolerance towards Arabs indicator in the Jewish sample. Thirdly, the literature reports that Muslim networks have a considerably different impact on tolerance compared to networks of Christians and Jews. Thus, Djupe and Calfano (2012) report that among American Muslims networks generated with the name generator procedure are not nearly as politically charged as are the networks of adherents of other religious traditions. In addition, levels of political discussion and politically expert discussion partners are significantly lower among Muslims than among other denominations (Djupe and Calfano 2012). Consequently, the ethnic measure of network heterogeneity is predictably more sensitive in the subsample of Arabs.

While the direct effects of values are statistically insignificant, as in the Jewish sample (see Model II), we were interested in testing their role as a boundary condition to the effect of cross-cutting discourse. Models IIIa-b—presenting the interactions between diversity and values in affecting tolerance—yield a significant interaction among exposure to political disagreement and conservation values for both social and political tolerance towards one's least-liked groups. As in the Jewish sample, the effect of contact with Jews is significantly moderated by conservation values. Figure A2 depicts the interactive effects, indicating how the marginal effect of contact with Jews changes with conservation (1 on the x-axis) vs. openness (0 on the x-axis) values, with 95% confidence intervals.

Generalizing the confirmation of H_{3a}, results show that the positive contribution of contact with Jews to social and political tolerance decreases with conservatism values. For political tolerance, the positive effect of contact loses its statistical significance towards the mean on the values scale (\bar{x} =.613), as in the Jewish sample. For social tolerance, the effect of contact is marginally significant only where openness is high (p=.070 where the scale is at the zero point, that is, openness is at its maximum; p=.087 where the scale is at .1; p=.115 where the scale is at .2). Still, the interaction of contact with self-transcendence vs. self-enhancement values is insignificant for both dependent variables, as was the case for social and political tolerance towards Arabs in the Jewish sample.

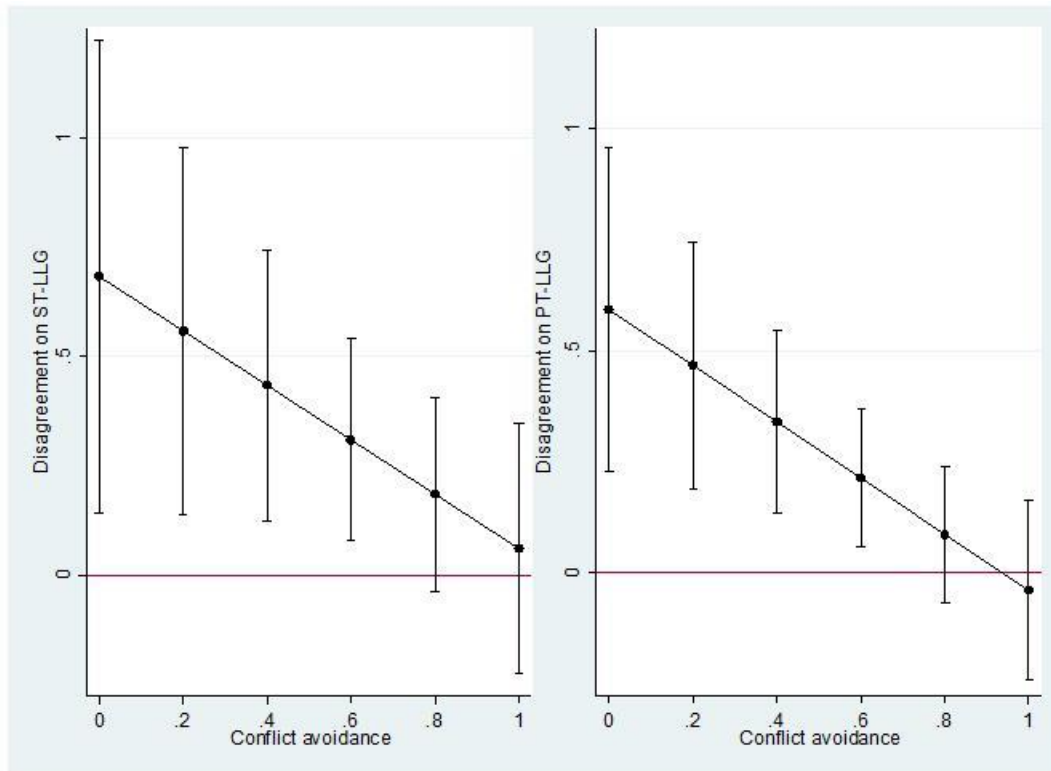
Overall, these results generalize the moderated effect of network diversity and values on tolerance from the Israeli-Jewish to the Israeli-Arab population. Future research should further examine generalization across countries and social settings.

Table A6. Tolerance towards Least-Liked Group and towards Arabs, with Conflict Avoidance

| | Social tolerance-LLG | | Political tolerance-LLG | | Social tolerance-Arabs | | Political tolerance-Arabs | |
|--|----------------------|--------------------|-------------------------|---------------------|------------------------|--------------------|---------------------------|--------------------|
| | Ia | Ib | IIa | IIb | IIIa | IIIb | IVa | IVb |
| Exposure to disagreement | .683 (.275)** | .655 (.533) | .592 (.184)*** | .639 (.349)* | - | .238 (.194) | - | .061 (.132) |
| Cross-group contact | - | - | - | - | .183 (.093)** | .167 (.104) | .230 (.062)*** | .234 (.069)*** |
| Conflict avoidance | .100 (.120) | .025 (.117) | .048 (.089) | -.006 (.091) | -.120 (.059)** | -.062 (.093) | -.120 (.036)*** | -.057 (.058) |
| Conservation vs. openness (w/o security) | - | .386 (.336) | - | .453 (.195)** | - | - | - | - |
| Self-transcendence vs. enhancement | - | -.548 (.310)* | - | -.285 (.217) | - | - | - | - |
| Disagreement* conflict avoidance | -.623 (.349)* | -.416 (.353) | -.632 (.239)*** | -.424 (.244)* | - | -.137 (.271) | - | -.196 (.175) |
| Disagreement* conservation | - | -1.727 (.744)** | - | -1.347 (.467)*** | - | - | - | - |
| Disagreement* transcendence | - | 1.349 (.727)* | - | .888 (.482)* | - | - | - | - |
| Contact* conflict avoidance | - | - | - | - | -.046 (.122) | -.055 (.140) | -.061 (.085) | -.070 (.095) |
| Contact* conservation | - | - | - | - | - | - | - | - |
| Contact* transcendence | - | - | - | - | - | - | - | - |
| Abstract democratic norms | .246 (.120)** | .240 (.127)* | .332 (.076)*** | .320 (.082)*** | .073 (.082) | .039 (.098) | .227 (.049)*** | .218 (.056)*** |
| Threat – LLG | -.229 (.067)*** | -.209 (.069)*** | -.209 (.048)*** | -.178 (.052)*** | -.002 (.044) | -.025 (.050) | -.106 (.030)*** | -.106 (.032)*** |
| Threat – Arabs | -.071 (.067) | -.086 (.071) | -.117 (.049)** | -.127 (.051)** | -.310 (.045)*** | -.308 (.053)*** | -.165 (.032)*** | -.193 (.035)*** |
| Ideology | -.064 (.097) | -.034 (.101) | -.063 (.061) | -.067 (.062) | .078 (.054) | .107 (.060)* | .105 (.041)** | .080 (.043)* |
| Religiosity | -.141 (.085)* | -.126 (.087) | .020 (.058) | .006 (.058) | -.202 (.050)*** | -.199 (.055)*** | -.036 (.042) | -.093 (.046)** |
| Education | -.021 (.091) | .011 (.093) | .037 (.068) | .028 (.070) | .023 (.061) | -.052 (.067) | .098 (.045)** | .051 (.052) |
| Income | .061 (.072) | .058 (.078) | -.051 (.050) | -.074 (.053) | .122 (.052)** | .097 (.061) | -.035 (.034) | -.032 (.041) |
| Discussing politics | -.107 (.077) | -.105 (.080) | .046 (.050) | .061 (.051) | -.061 (.046) | -.018 (.051) | -.003 (.037) | -.032 (.044) |
| Parent | -.049 (.048) | -.061 (.053) | -.023 (.040) | -.036 (.042) | -.011 (.032) | -.008 (.034) | .041 (.024)* | .039 (.028) |
| Male | .003 (.042) | -.003 (.042) | .033 (.031) | .023 (.032) | .015 (.028) | -.006 (.032) | .036 (.021)* | .045 (.023)* |
| Age group | .075 (.070) | .090 (.076) | .028 (.054) | .018 (.058) | .039 (.051) | -.002 (.054) | .163 (.036)*** | .140 (.044)*** |
| Network size | .002 (.016) | .006 (.016) | -.004 (.012) | -.005 (.012) | .007 (.010) | -.007 (.012) | .004 (.007) | -.010 (.009) |
| LLG – left vs. right | -.195 (.062)*** | -.204 (.063)*** | -.154 (.038)*** | -.160 (.039)*** | - | - | - | - |
| Constant | .516 (.192)*** | .661 (.268)** | .466 (.157)*** | .460 (.208)** | .513 (.111)*** | .569 (.161)*** | .358 (.082)*** | .500 (.106)*** |
| N | 218 | 207 | 218 | 207 | 275 | 217 | 274 | 216 |
| R ² | 28.13% | 31.18% | 39.32% | 39.51% | 34.63% | 35.30% | 50.87% | 52.58% |

Table entries are unstandardized OLS coefficients, robust standard errors in brackets. *** two-tail 99% confidence level, ** two-tail 95%, * one-tail 95%.

Figure A3. The Interactive Effect of Exposure to Disagreement and Conflict Avoidance on Tolerance towards One's Least-Liked Group



Average marginal effects with 95% confidence intervals.

Robust analysis: The effect of network diversity and conflict avoidance on tolerance

The literature had recently exemplified the effect of conflict avoidance as a moderator of network discussion on tolerance (Testa et al. 2014). We were thus interested in replicating this effect for our Israeli sample. While we did not have available in our data Testa et al.'s measure of conflict avoidance or any other indicators of personality traits, our survey included an item for Schwartz's value of security (conceptually tapping one's desire for safety, harmony, and the stability of society, of relationships, and of self), which resembles a measure of conflict avoidance. On a scale ranging from "not like me at all" (1) to "very much like me" (6), respondents indicated how similar to themselves is the following portrait of a person: "It is important to her/him to live in secure surroundings. S/he avoids anything that might endanger her/his safety." In an auxiliary analysis, we used this item as a measure of conflict avoidance, and tested for its interactive effect with network diversity in our sample.

Results are presented in Table A6 and Figure A3 above. First, a statistically significant interaction emerges among the proxy for conflict avoidance and exposure to disagreement in affecting political and social tolerance towards one's least-liked group (Models Ia and IIa). To facilitate interpretation, Figure A3 depicts how the marginal effect of exposure to disagreement changes as one moves from conflict seeking (0 on the x-axis) to conflict avoidance (1 on the x-axis), with 95% confidence intervals. Replicating Testa et al.'s (2014) results, the positive effect of diversity wanes with conflict avoidance, and completely loses its statistical significance for the conflict averse.

Next, we were interested in integrating our main interactions between values and exposure to disagreement in order to compare their effect to the conditional effect of conflict avoidance. Since the proxy for conflict avoidance is one of the items composing the measure for conservation vs. openness values, we have reconstructed the conservation measure without it. Models Ib and IIb show that both the interactive effect of disagreement with conservation values (minus the conflict avoidance item) and that of disagreement with self-transcendence values retain their statistically significant effects. The interactive effect of conflict avoidance and disagreement, on the other hand, loses its statistical significance on social tolerance towards one's least-liked group, but retains a marginal significance for political tolerance towards one's least-liked group.

Moving to tolerance towards Arabs, conflict avoidance did not condition the effect of contact with Arabs (Models IIIa and IVa) or the effect of exposure to disagreement (Models IIIb and IVb), perhaps because the Israel-Arab conflict is unavoidable and chronic for all Israelis, regardless of their personal conflict preferences.

Overall, the effect of conflict avoidance, at least using this proxy measure and dataset, proves more limited than the effect of the openness to change value dimension from which it is derived. First, conflict avoidance did not condition the effect of diversity on tolerance towards Arabs. Secondly, its effect size dwindles when the interaction with values is specified, and loses statistical significance for one of the two LLG models. Still, future research should repeat this comparison of moderators using more accurate measures of conflict avoidance and additional personality traits.

Appendix D. Validation of the Values Measures

The original PVQ consists of 57 items, making it challenging for the respondent to produce a meaningful set of answers in the short period of time allocated for the telephone interview. Working on the ESS project, Schwartz offered a substantial reduction of the scale to 21 items, which proved to be a valid and effective substitute for the 57-item original scale. For this project we offer a further reduction of the scale to 10 items.

Procedure:

1. 10 value types were at first constructed with 21 items.
2. For each of the 21 items the correlations were run with the other nine value types.
3. From each pair of items (three in the case of universalism) the item that showed stronger correlation with the other nine value types was chosen for the reduced scale.

The two graphs below exemplify the results for the multidimensional scaling of values constructed on the basis of the 21- and 10-items scales.

Figure A4. Ten-item scale, Euclidean distance model

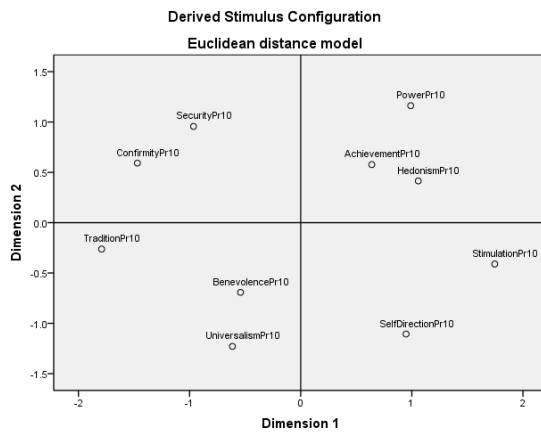
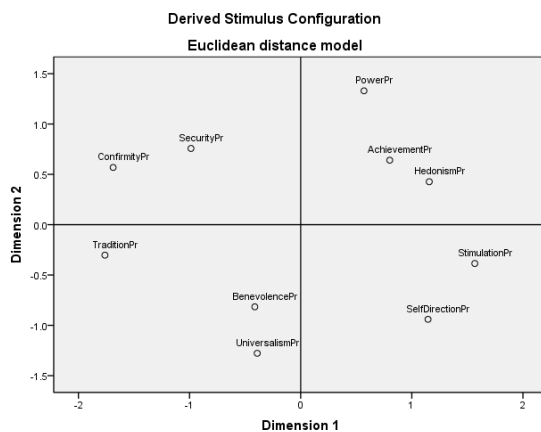


Figure A5. Twenty-one item scale, Euclidean distance model



Validation based on Schwartz's specification for the ESS

Political Orientation

The reduced scale repeats the distribution found for the 21-item scale and interacts with the political orientations in a predicted way. As in Schwartz, the strongest value differences were found for security, tradition, and conformity values (with nationalists high) and for universalism and self-direction values (with liberals high). The data reveal significant differences in the expected direction for five value types; and these differences remain in a reduced scale.

Table A7. Mean Importance of the Ten Values Based on 21- and 10-Item Scales as a Function of Political Orientations (ESS sample) (1-very much like respondent; 0 not at all like respondent).

| | Right (Nationalist) (N=408) | | Center (Centrist) (N=283) | | Left (Liberal) (N=67) | | F | |
|----------------|-----------------------------------|-------|---------------------------------|-------|-----------------------------|-------|-----------|----------|
| | 21 | 10 | 21 | 10 | 21 | 10 | 21 | 10 |
| Security | .6938 | .6695 | .6399 | .6189 | .5650 | .5515 | 4.441* | 3.78* |
| Conformity | .5454 | .5919 | .4879 | .5188 | .3958 | .4142 | 5.211** | 7.984*** |
| Tradition | .6068 | .6096 | .4425 | .5346 | .3431 | .4478 | 57.656*** | 5.60** |
| Benevolence | .6809 | .6609 | .6304 | .5754 | .6201 | .5637 | .686 | 3.44* |
| Universalism | .6419 | .6149 | .6292 | .6070 | .6552 | .6225 | 28.870*** | 10.06*** |
| Self-Direction | .6368 | .5974 | .6071 | .5689 | .6520 | .6324 | 16.493*** | 10.01*** |
| Stimulation | .4444 | .3636 | .3869 | .3186 | .3799 | .3259 | .439 | .908 |
| Hedonism | .5689 | .5640 | .5268 | .5213 | .5025 | .4902 | .811 | .285 |
| Achievement | .6385 | .6362 | .5872 | .5771 | .5833 | .5637 | .837 | .120 |
| Power | .4715 | .4364 | .4196 | .3617 | .3799 | .3578 | .136 | .856 |

*** two-tail 99% confidence level, ** two-tail 95%, * one-tail 95%.

Age: Schwartz found that age correlates most positively with conservation values (tradition, conformity, security) and most negatively with openness to change values (self-direction, stimulation) and hedonism; and that age correlates positively with self-transcendence values (benevolence, universalism) and negatively with self-enhancement values (power, achievement). The reduced scale replicates those findings—the direction of relationship always coincides with the predicted relationship and the one found for the 21-item scale; and the power of ties is stronger when the 10-point scale is applied to measure power, achievement, stimulation, universalism, benevolence, and tradition value types.

Education: In both scales the expected positive correlations of education with self-direction (the correlation with stimulation was insignificant) and universalism values and negative correlations with conformity (insignificant) and tradition values were observed.

Religiosity: Both scales produced similar results consistent with the predictions made by Schwartz. Tradition and conformity values were positively correlated with religiosity, and self-direction, achievement, stimulation, and power was negatively correlated.

Gender: As predicted by Schwartz, the differences based on gender were inconsistent and largely insignificant. Men emphasize security, while women value tradition in the 10-item scale, while all the differences are insignificant in the 21-item scale.

Use of the Internet (Use of Mobile Phones in Schwartz's specification).

Mobile phone use can no longer be considered as an innovative behavior, though the Internet can be perceived as a resource that for the majority of people is a source of fun. Hedonism, self-direction, and achievement values should be more

important among frequent Internet users than among non-users, while tradition, conformity, and security values should be less important. The results received for the 21- and 10-point scales are very similar.

Left-Right scale: the results of the 10-item scale largely replicate the results received for 21-item scale.

Table A8. Correlations of the Ten Types with Age, Education, and Religiosity

| | Age (N=1265) | | Education [†] (N=1283) | | Religiosity (N=1285) | | Use of Internet (N=1290) | | Left-Right (N=1211) | |
|----------------|--------------|---------|------------------------------------|---------|-------------------------|---------|-----------------------------|---------|------------------------|---------|
| | 21 | 10 | 21 | 10 | 21 | 10 | 21 | 10 | 21 | 10 |
| Security | .202** | .157** | -.071* | -.083** | -.001 | .033 | -.197** | -.203** | .056 | .007 |
| Conformity | .288*** | .230** | -.026 | -.028 | .087** | .091** | -.145** | -.133** | .066* | .088** |
| Tradition | .188** | .286** | -.211** | -.086** | .559** | .211** | -.331** | -.238** | .328** | .147** |
| Benevolence | .111** | .143** | .086** | .013 | .026 | .104** | -.048 | -.137** | -.035 | .044 |
| Universalism | .220*** | .258** | .203** | .129** | -.157** | -.095** | -.008 | -.036 | -.252** | -.171** |
| Self-Direction | -.080** | -.046 | .204** | .232** | -.205** | -.102** | .193** | .170** | -.147** | -.074* |
| Stimulation | -.291*** | -.299** | -.047 | -.019 | -.105** | -.102** | .138** | .177** | -.010 | -.028 |
| Hedonism | -.321** | -.249** | -.135** | -.183** | -.056 | .012 | .145** | .105** | -.040 | -.048 |
| Achievement | -.186** | -.201** | .051 | .035 | -.132** | -.061* | .215** | .175** | -.003 | .036 |
| Power | -.102** | -.201** | .023 | -.020 | -.108** | -.055 | .055 | .058* | -.006 | .017 |

*** two-tail 99% confidence level, ** two-tail 95%, * one-tail 95%.

[†] Three different variables were tried for education (level of education–international gradation, level of education–gradation adapted for Israel, and years of education). All produced very similar results. In the table we report the data for education levels adapted for Israel.

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