The White-Man Effect: How Foreigner Presence Affects Behavior in Experiments

Appendix

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Tables A.1 and A.2 present descriptive statistics of the key independent and dependent variables used in the analysis.

Our preferred specification is to look at the aggregate giving across the dictator games as we do not have the power to identify different effects across games. Consistent with this, if we look separately at total giving disaggregated by game in Table A.3, we observe coefficients of 224, 119 and 184 for the anonymous own-village, non-anonymous own village and other village games, respectively. Individually, the effect is marginally insignificant for the other village game (with a p-value of .101), where the coefficient indicates an intermediate increase in giving in response to the treatment. The effect appears to be most precisely estimated for the anonymous own village game. However, as discussed further in Table A.6, we are not to statistically distinguish effects across games.

Table A.4 shows that our main results are robust to age and communal farm indicator which appeared to significantly differ in treatment and control areas at the 10% level. Columns (3) also shows that the treatment effect does not vary based on the number of days in between the survey and the game sessions. Columns (4)-(5) show robustness to different ethnicity fixed effects, generated on the basis of broader linguistic categories using parent groups from the third and fourth levels in the Atlantic language hierarchy. The Atlantic language hierarchy is catalogued at http://multitree.org.

Table A.5 shows that our main results are robust to different samples used during the analysis. Column (1) drops one observation where monetary contributions to religious groups was extremely high (with a value of 600,000 which exceeded the 99th percentile of the distribution by a factor of 10). Column (2) drops three village outliers in length of exposure to aid. Column (3) drops the two districts— Koinadugu and Bombali— where more translators were required due to the linguistic diversity of the area. This shows that the results are not sensitive to translator quality. Finally, column (4) shows the robustness of the effect to the sub-sample for which our main individual and village control variables are available.

Table A.6 examines effects in the three dictator games using a pooled specification. The

first column examines the average impact on giving across all three games. We include game fixed effects denoted by Game 1 and Game 2 (defined relative to the omitted category, Game 3 – the Anonymous Other Village Game). In this column, the coefficient of 174 on the White-Man variable indicates that giving on average increased by 17 percent above the control group mean of 997.

In the remaining columns of this table, we introduce interaction terms between the white-man indicator and different game types. In columns (2), we consider the effects of both Game 1 and Game 2 relative to Game 3, where giving increased by an intermediate amount in response to treatment. The interactions on Game 2 x White-man and Game 1 x White-man are insignificant, indicating that the treatment effects in these games are not significantly distinguishable from the effect in Game 3.

Next, we try to assess if the effect in any one game differs significantly from the average of the other two. Column (3) examines if the effect in Game 2 significantly differs relative to the average of Games 1 and Game 3, which comprise the omitted category. Column (4) asks if the effect in Game 1 differs significantly from Games 2 and 3, which together comprise the omitted category here. And, column (5) considers if the effect in Game 3 differs significantly from Games 1 and 2 which are the omitted category. The insignificant interaction terms in these specifications indicate that overall, the effects across games are not statistically distinguishable from one another.[1]

Table A.7 shows that the results from Table 4, 5 and 7 hold for different metrics of aid exposure. "NGO-aid" is a dummy variable for whether an NGO either owns a school/clinic or currently provides resources to the local school or clinic, or has contributed to the construction of public facilities. "Years NGO-owned facilities" is the number of years that a NGO has owned either a school or clinic in the village, and thus, has more fine-grained variation than the NGO aid indicator.

Table A.8 shows the robustness of the results in Table 7 to dropping the 5% most aid

[1]These results remain the same if two game effects are put into each specification i.e., if we also include Game 1 dummy variables in columns (3)-(5).

exposed areas, comprising three villages. This table utilizes our comprehensive aid variable — "Years of NGO activityand examines its interaction effect with the white-man treatment. The coefficients in column (1) indicate that those in the top 20% most aid exposed villages are more inclined to believe that the games in which the white man is present are designed to test them for aid.

Table A.9 shows the results from Tables 3, 5, and 8 disaggregated by game. The coefficients suggest that the effects are broadly consistent across game, though they are estimated with different degrees of precision. For example, the fall in the degree to which real-world contributions predict giving is more precisely estimated for the second game, the Non-anonymous own-village game. On the other hand, the interactions with exposure to aid are more precise for the other two games. Finally, the customary authority interactions are precisely estimated across all three games.

Finally, Table A.10 shows the fraction of individuals in treatment and control areas opting for the three belief options, in the highly aid exposed villages (comprising the top 20% of the aid distribution) and the remaining villages. This table confirms the same patternin the highly-aid exposed villages, the white-man treatment is associated with a higher fraction of individuals who believe that the purpose of the games is to test for aid suitability.

Table A.1: Summary Statistics of Key Individual-level Variables

	Observations	Mean	Std. Dev.	Min.	Max.
Total giving	708	3216.95	2648.11	0.00	12000.00
Game 1 (Anonymous Own-village)	720	1065.28	1032.12	0.00	4000.00
Game 2 (Non-anonymous Own-village)	720	1211.25	995.59	0.00	4000.00
Game 3 (Anonymous Other-village)	708	959.04	1005.16	0.00	4000.00
Giving	2148	1079.19	1015.91	0.00	4000.00
Aid test	719	0.14	0.35	0.00	1.00
Give money	719	0.64	0.48	0.00	1.00
Research	719	0.22	0.41	0.00	1.00
Contr. religious group	665	0.31	0.46	0.00	1.00
Contr. secret society	665	0.07	0.25	0.00	1.00
Contr. village development committee	665	0.08	0.27	0.00	1.00
Contr. women's group	665	0.10	0.30	0.00	1.00
Contr. youth group	665	0.09	0.29	0.00	1.00
Contr. parent-teacher association	665	0.05	0.22	0.00	1.00
Religious money	714	4631.52	26876.92	0.00	600000.00
Brushed road	710	0.35	0.48	0.00	1.00
Public facility	714	0.47	0.50	0.00	1.00
Customary authority	720	0.25	0.44	0.00	1.00
Met white person 1 to 10 times	715	0.46	0.50	0.00	1.00
Never met white person	715	0.10	0.30	0.00	1.00
Age	712	42.33	15.38	12.00	110.00
Years of education	711	1.98	3.61	0.00	13.00
Female	715	0.54	0.50	0.00	1.00
Ethnic majority	714	0.89	0.31	0.00	1.00
Household asset index	706	0.00	1.97	-1.72	20.34

Note: Total giving is the sum of giving in the Anonymous Own-village, Anonymous Other-village, and Non-anonymous Own-village games. Giving is the amount given across the three dictator games when the observations from the games are pooled together. Aid test, Give money and Research are indicators for whether participants believed that researchers wanted to test for aid, distribute money, or find out more about the community, respectively. Customary authority is an indicator of whether the individual comes from the household of a chief, religious leader or secret society leader. The variables starting with "Contr. " indicate whether the respondent contributed financially to the respective group or not; public facility indicates whether respondent has contributed labor or money to a public facility the past 6 months; and "Road brush" if respondent had brushed a village road in the past month.

Table A.2: Summary Statistics of Key Village-level Variables

	Observations	Mean	Std. Dev.	Min.	Max.
NGO aid	720	0.90	0.30	0.00	1.00
Years NGO-owned facilities	720	12.18	22.50	0.00	106.00
Years NGO activity	720	13.42	22.41	0.00	106.00
Number of households	720	284.27	411.02	3.00	2000.00
Market community	720	0.13	0.34	0.00	1.00
Buildings burned during war	720	5.77	15.43	0.00	100.00
Labor gang	720	0.95	0.22	0.00	1.00
Communal farm	720	0.37	0.48	0.00	1.00

Note: NGO-aid is whether an NGO either owns a school/clinicor currently provides resources to the local school or clinic, or has contributed to the construction of public facilities; Years NGO-owned facilities refers to the number of years that a NGO has owned either a school or clinic in the village. Years NGO activity is the number of years a NGO has either owned a school or a clinic, or the number of years since a NGO contributed to the construction of the school or clinic, if a NGO provides current support to the school or clinic.

Table A.3: Giving by Game Type

	(1) Anon. Own-Village	(2) Non-Anon. Own-Village	(3) Anon. Other-Village
White-man	223.585**	118.994	183.908
	(102.443)	(103.127)	(110.449)
Ethnicity fe	Yes	Yes	Yes

Note: All specifications include district and ethnicity fixed effects. Robust standard errors clustered at the village level in parentheses. *** is significant at the 1% level, ** is significant at the 5% level and * is significant at the 10% level.

Table A.4: Robustness to Controls

	(1) Total giving	(2) Total giving	(3) Total giving	(4) Total giving	(5) Total giving
White-man	579.169**	526.681*	957.060*	539.852*	548.941*
	(280.492)	(279.043)	(523.833)	(287.944)	(292.644)
Age	6.064				
	(6.619)				
Communal farm		-116.582			
		(408.673)			
Days from survey			0.461		
			(18.853)		
Days from survey x white-man			-9.728		
			(13.094)		
Linguistic group for ethnicity f.e.s	Primary	Primary	Primary	Parent-3	Parent-4
Observations	646	653	652	653	653

Note: Robust standard errors clustered at the village level in parentheses. All specifications include district and ethnicity fixed effects. Columns (1) to (3) use ethnicity fixed effects based on the primary local language. Columns (4) and (5) use alternative measures of ethnicity constructed from the 3rd (Parent-3) and 4th (Parent-4) highest parent group of the Atlantic language family. "Days from survey" indicates the time passed between conducting the household survey and administering the games. *** is significant at the 1% level, ** is significant at the 5% level and * is significant at the 10% level.

Table A.5: Robustness to Samples

	(1) Total giving	(2) Total giving	(3) Total giving	(4) Total giving
White-man	540.103*	539.252*	551.338*	665.217**
	(293.055)	(306.420)	(297.739)	(291.990)
Ethnicity fe	Yes	Yes	Yes	Yes
Observations	652	620	601	564

Note: Column (1) drops one religious-contribution outlier; column (2) drops three village outliers in exposure to aid; column (3) drops observations that contain missing missing values in the control variables; column (4) drops the two districts— Bombali and Koinadugu — where linguistic diversity meant that more than one translator was used.

Table A.6: Giving Across Games

	(1) Giving	(2) Giving	(3) Giving	(4) Giving	(5) Giving
White-man	174.003*	180.287	204.015*	144.147	170.911*
	(98.905)	(112.248)	(102.948)	(102.087)	(98.164)
Game 1 x White-man		48.818		85.116	
		(67.544)		(57.743)	
Game 2 x White-man		-67.571	-91.253		
		(72.926)	(62.046)		
Game 3 x White-man					9.377
					(61.219)
Game 1		83.127*		-63.032*	
		(44.766)		(31.805)	
Game 2	145.972***	287.293***	245.003***		
	(35.291)	(52.319)	(38.874)		
Game 3	-107.481***				-185.210***
	(34.041)				(45.001)
Omitted Category	Game 1	Game 3	Games 1 and 3	Games 2 and 3	Games 1 and 2
Control group means					
Omitted category	955.556	872.126	914.548	1018.362	1057.639
Overall	997.191	997.191	997.191	997.191	997.191

Note: Game 1 is the Anonymous Own-Village dictator game; Game 2 is the Non-Anonymous Own-village dictator game; and Game 3 is the Anonymous Other-village game. The third-last row shows the comparison group (the omitted category) and the second-last and last rows show the control and treatment mean respective for the comparison group. Robust standard errors clustered at the village level in parentheses. ** is significant at the 5% level and * is significant at the 10% level.

Table A.7: Alternative Aid Meaures

	OLS		Logit	Multinomial Logit			Logit	Multinomial Logit		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Total giving	Total giving	Aid Test	Aid Test over Give Money	Aid Test over Research	Give Money over Research	Aid Test	Aid Test over Give Money	Aid Test over Research	Give Money over Research
Years NGO-owned facilities x white-man	-19.602**		1.055***	1.053***	1.056***	1.003				
	(9.434)		(0.019)	(0.019)	(0.021)	(0.699)				
Years NGO-owned facilities	3.995		0.971***	0.972**	0.965***	0.992				
	(6.209)		(0.11)	(0.010)	(0.012)	(0.003)				
NGO aid x white-man		-2,351.847***					11.135***	7.767***	41.016***	5.280***
		(793.006)					(5.447)	(3.982)	(25.335)	(2.217)
NGO aid		478.874					0.497*	0.552	0.238***	0.431***
		(625.908)					(0.201)	(0.228)	(0.110)	(0 .102)
White-man	654.858	1,488.102**	0.773	0.685	0.808	1.178	0.327	0.339	0.212	(0.423)
	(983.891)	(708.945)	(0.561)	(0.502)	(0.772)	(0.699)	(0.261)	(0.267)	(0 .234)	(0.797)
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Village-level controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	636	636	636	636	636	636	636	636	636	636

Notes. Robust standard errors clustered at the village level in parentheses. *** is significant at the 1% level, ** is significant at the 5% level and * is significant at the 10% level. See table 4 for notes and text for control variables

Table A.8: Aid exposure and Beliefs: Alternative Sample

	Logit	Multinomial Logit			Logit	Multinomial Logit		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Aid Test	Aid Test over Give Money	Aid Test over Research	Give Money over Research	Aid Test	Aid Test over Give Money	Aid Test over Research	Give Money over Research
White-man	0.235***	0.250***	0.187***	0.749	0.715	0.612	0.828	1.353
	(0.099)	(0.107)	(0.0813)	(0.178)	(0.490)	(0.434)	(0.721)	(0.797)
Years NGO activity x white-man	1.051**	1.051**	1.054*	1.004	1.068***	1.067**	1.072***	1.004
	(0.029)	(0.029)	(0.031)	(0.011)	(0.028)	(0.029)	(0.028)	(0.014)
Years NGO activity	0.966***	0.968*	0.961*	0.993	0.964*	0.964	0.96**	0.995
	(0.066)	(0.019)	(0.021)	(0.01)	(0.021)	(0.023)	(0.019)	(0.012)
Met white person 1 to 10 times x white-man					6.93	6.707	7.455	1.111
					(7.363)	(7.090)	(9.303)	(0.743)
Never met white person x white-man					7.721*	7.444*	8.511*	0.796
					(8.245)	(7.915)	(10.512)	(0.320)
Met white person 1 to 10 times					1.41	1.319	1.825	1.383
					(0.503)	(0.464)	(0.837)	(0.394)
Never met white person					0.64	0.618	0.747	1.207
					(0.580)	(0.555)	(.787)	(0.589)
Individual-level controls	N	N	N	N	Y	Y	Y	Y
Village-level controls	N	N	N	N	Y	Y	Y	Y
Observations	619	619	619	619	603	603	603	603

Notes. Robust standard errors clustered at the village level in parentheses. Columns 1-8 display the odds ratio (for multinomial logit, the relative risk ratio) of each outcome for a unit increase in the relevant independent variable (calculated as $\exp(\beta)$, where β is the log-odds ratio). Columns 1 and 5 display the odds ratio from a logit regression on the "Aid Test" indicator variable. Columns 2-4 and 6-8 display the relative risk ratios for each pair of choices from a multinomial logit regression on the categorical variable of participant beliefs over the 'aid test', 'give money' and 'research' choices. Individual-level and village-level controls are the same as those listed in Table 6. All specifications include district and ethnicity fixed effects. *** is significant at the 1% level, ** is significant at the 5% level and * is significant at the 10% level.

Table A.9: Giving by Games: Interaction Effects

	Anonymous Own-Village Giving			Non-Anonymous Own-village Giving			Anonymous Other-village Giving		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
White-man	332.647***	335.473***	222.186**	176.940	274.976**	116.770	264.591**	296.306***	181.100
	(114.765)	(108.637)	(101.929)	(112.234)	(104.287)	(102.685)	(126.446)	(110.552)	(110.610)
Years NGO activity x white-man	-9.629***			-4.300			-7.372*		
	(3.265)			(4.723)			(3.905)		
Years NGO activity	2.550			2.614			1.575		
	(2.363)			(2.705)			(2.572)		
Customary authority x white-man		-418.130**			-600.176***			-423.202**	
		(170.315)			(166.569)			(177.366)	
Customary authority		314.049***			367.783***			284.079**	
		(103.427)			(98.633)			(111.262)	
Monetary contr. index			128.027			185.903*			46.475
			(101.682)			(109.239)			(76.871)
Monetary contr. index x white-man			-87.737			-179.137			-33.581
			(109.479)			(112.058)			(81.249)
Observations	720	720	719	720	720	719	708	708	707

Note: All specifications include district and ethnicity fixed effects. Robust standard errors clustered at the village level in parentheses. *** is significant at the 1% level, ** is significant at the 5% level and * is significant at the 10% level.

Table A.10. Aid Exposure and Beliefs

	Top 20% aid-exposed villages		Other villages	
	Control	Treatment	Control	Treatment
Aid Test	0.05	0.24	0.24	0.06
Research	0.27	0.23	0.16	0.25
Give Money	0.68	0.54	0.60	0.69
Observations	85	71	250	258

Notes: The table reports fractions of individuals in the treatment and control group who selected the Aid Test, Research and Give money options, for the top 20% most aid exposed villages and the other remaining villages.