1 The Implications of Data Errors in Gartzke and Weisiger 2013

In "Permanent Friends? Dynamic Difference and the Democratic Peace," we developed a theoretical argument with the implication that the democratic peace will weaken over time as the system as a whole grows more democratic. In a response to our article, Dafoe, Russett, and Oneal (2013) point to two data errors in our analysis, in the handling of some cases in which Polity data for a country is missing and in a control for geographic contiguity. We thank them for bringing these errors to light. Oddly, however, rather than investigate the implications of these errors for our analysis, they simply discard our analysis entirely and adopt an alternate approach that differs in fundamental ways, and on the basis of which they reach quite different conclusions. Point 2a (p. 202) of their criteria for evaluating challenges to the democratic peace holds that

> Analyses should be based wherever possible on standard models to minimize the chance that unrelated aspects of the analysis are driving the results. Deviations from standard practice should be scrutinized to see whether they account for novel findings.

In our analysis, we were motivated by these concerns to do such things as adopting the "weakest link" (lower dyadic Polity score) measure of dyadic democracy, which was established as an industry standard in prior work by Russett and Oneal (2001). Because Dafoe, Russett, and Oneal make a series of major changes to our model specifications, it is unclear to what extent the data errors that they identify are important for our results. We thus correct those errors and replicate our initial findings.

Table 1 replicates table 2 from the original paper and presents results when correcting the relevant errors; table 2 does the same thing for the original table 3. For every model of each table, we first replicate the results from our original analysis, and then present the results from a revised analysis correcting the data errors. Other than a substantial change for the effect of contiguity, the results are substantively identical to those reported earlier. Figures 1, 2, and 3 replicate figure 2 of the original figure, working from models 2.4, 3.2, and 3.4 respectively. In all cases, democracies become more likely to come into conflict as the proportion of the system that is

democratic increases.[1] Data problems thus clearly to do not explain the discrepancy between our results and those of Dafoe, Russett, and Oneal.

1.1 Replication Data

The files necessary to replicate these results are posted in the same folder as this response. GW2013_corrected.dta contains the original data as well as corrected versions of the regime variables. analysis_042013.do contains the Stata commands necessary to reproduce the results reported here. We first replicate each regression from the original paper and then rerun the analysis using the corrected variables. After producing the main tables, the do file calls three additional do files (response_prediction_dempower.do, etc.) that generate the figures produced here. For simplicity, we also include those figures as .eps files here.

[1] Note that the value of the systemic standard deviation variable is lowest in the early years of the sample, when nearly all countries are autocracies, and increases over time as the world becomes more democratic. Were the international system to become overwhelmingly democratic, this relationship obviously would cease to hold; as it is, the most democratic period in our sample (post-Cold War) is also the period with the highest standard deviation.

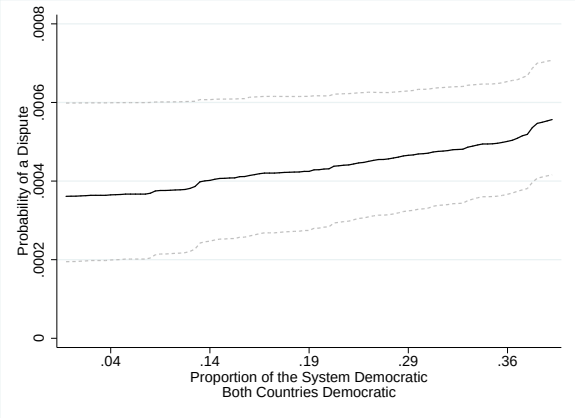

Figure 1: Predicted Probability of Jointly Democratic Conflict as the System Becomes More Democratic

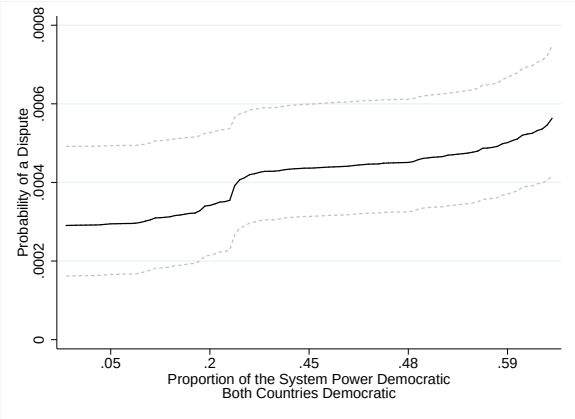

Figure 2: Predicted Probability of Jointly Democratic Conflict as Democracies Become More Powerful

Table 1: Replication of Table 2: Effects of Systemic and Dyadic Difference on MIDs

	Proportion of Democracy (PropDem)							
DV: MID onset	2.1		2.2		2.3		2.4	
Democracy (low)	-0.071***	-0.099***	0.038*	0.023	0.040†	0.028	0.023	0.015
	(0.015)	(0.016)	(0.017)	(0.017)	(0.021)	(0.021)	(0.020)	(0.021)
Democracy (high)	0.11***	0.12***						
	(0.015)	(0.015)						
Dyadic Difference			0.11***	0.12***	0.11***	0.13***	0.25***	0.23***
			(0.015)	(0.015)	(0.017)	(0.016)	(0.031)	(0.036)
Systemic Diff.					-0.15	-0.32	1.70***	1.05†
					(0.44)	(0.49)	(0.50)	(0.57)
Dyadic × Systemic							-0.51***	-0.38***
							(0.094)	(0.11)
Distance (ln)	-0.39***	-0.10***	-0.39***	-0.10***	-0.39***	-0.10***	-0.39***	-0.10***
	(0.017)	(0.029)	(0.017)	(0.029)	(0.017)	(0.030)	(0.016)	(0.029)
Contiguity	-0.30***	2.34***	-0.30***	2.34***	-0.30***	2.33***	-0.29***	2.33***
	(0.047)	(0.24)	(0.047)	(0.24)	(0.047)	(0.25)	(0.045)	(0.24)
Alliance	0.059	0.16	0.059	0.16	0.062	0.17	0.070	0.17
	(0.11)	(0.12)	(0.11)	(0.12)	(0.11)	(0.12)	(0.11)	(0.11)
Major Power	1.39***	1.48***	1.39***	1.48***	1.38***	1.46***	1.40***	1.49***
	(0.15)	(0.13)	(0.15)	(0.13)	(0.16)	(0.13)	(0.15)	(0.13)
Capability Ratio	1.36***	0.95**	1.36***	0.95**	1.35***	0.95**	1.36***	0.99**
	(0.37)	(0.33)	(0.37)	(0.33)	(0.37)	(0.33)	(0.36)	(0.33)
Intercept	-0.79*	-4.80***	-0.79*	-4.80***	-0.77*	-4.72***	-1.24***	-5.06***
	(0.35)	(0.27)	(0.35)	(0.27)	(0.36)	(0.31)	(0.36)	(0.32)
N	634684	489694	634684	489694	634684	489694	634684	489694
Log-likelihood	-10886.9	-9628.4	-10886.9	-9628.4	-10886.7	-9627.5	-10858.8	-9614.9
$\chi^2_{(11,11,12,13)}$	2117.6	2448.5	2117.6	2448.5	2156.3	2449.8	2250.8	2541.5

Significance levels: †10%; *5%; **1%; ***0.1%

Table 2: Replication of Table 3: Alternative Measures of Systemic Regime Type Difference

	Systemic Democratic Power				*Systemic Democratic Standard Deviation*			
DV: New MID	3.1		3.2		3.3		3.4	
Democracy (low)	0.033	0.023	0.017	0.010	0.028	0.018	0.022	0.011
	(0.021)	(0.021)	(0.020)	(0.020)	(0.019)	(0.019)	(0.018)	(0.018)
Dyadic Difference	0.11***	0.12***	0.29***	0.27***	0.099***	0.12***	0.50***	0.54***
	(0.017)	(0.016)	(0.038)	(0.044)	(0.016)	(0.016)	(0.11)	(0.11)
Systemic Diff.	0.19	0.016	1.51***	1.05**	0.11†	0.063	0.29***	0.25***
	(0.31)	(0.35)	(0.33)	(0.37)	(0.061)	(0.062)	(0.060)	(0.064)
Dyadic × Systemic			-0.40***	-0.32***			-0.057***	-0.059***
			(0.073)	(0.087)			(0.015)	(0.015)
Distance (ln)	-0.39***	-0.10***	-0.39***	-0.10***	-0.40***	-0.10***	-0.40***	-0.099***
	(0.017)	(0.029)	(0.016)	(0.029)	(0.017)	(0.029)	(0.016)	(0.028)
Contiguity	-0.30***	2.34***	-0.30***	2.33***	-0.31***	2.34***	-0.30***	2.36***
	(0.047)	(0.24)	(0.045)	(0.24)	(0.047)	(0.24)	(0.045)	(0.23)
Alliance	0.057	0.16	0.073	0.17	0.024	0.14	0.039	0.14
	(0.11)	(0.12)	(0.11)	(0.11)	(0.11)	(0.12)	(0.11)	(0.12)
Capability Ratio	1.36***	0.95**	1.36***	0.99**	1.40***	0.98**	1.40***	1.03**
	(0.37)	(0.33)	(0.36)	(0.33)	(0.38)	(0.33)	(0.37)	(0.33)
Major Power	1.40***	1.48***	1.42***	1.50***	1.46***	1.52***	1.47***	1.54***
	(0.16)	(0.13)	(0.15)	(0.13)	(0.16)	(0.13)	(0.16)	(0.13)
Constant	-0.85*	-4.80***	-1.42***	-5.24***	-1.48**	-5.22***	-2.71***	-6.55***
	(0.38)	(0.32)	(0.37)	(0.32)	(0.54)	(0.53)	(0.52)	(0.53)
N	634684	489694	634684	489694	634684	489694	634684	489694
Log-likelihood	-10886.2	-9628.4	-10854.9	-9612.0	-10877.6	-9625.9	-10856.6	-9604.7
$\chi^2_{(12,13,12,13)}$	2167.2	2464.7	2253.4	2552.3	2261.0	2552.1	2388.8	2695.8

Significance Levels: †10%; *5%; **1%; ***0.1%

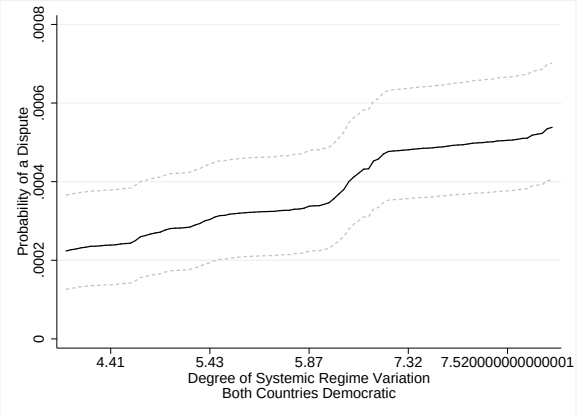

Figure 3: Predicted Probability of Jointly Democratic Conflict as the System Becomes More Diverse