Enos 2014 Replication

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Enos (2014) tests whether casual exposure to another demographic group causes a negative reaction to that group. Commuters who are randomly assigned to a train car with Spanish speaking collaborators will be less tolerant of Hispanics in their survey answers after 3 days. After 10 days, however, the effect will lessen. I replicate Enos's main results and tests the balance between the treatment and control groups using propensity scores.

Table 1

variable	subset	N	ate	greater.p.value	lesser.p.value	x.sd	x.mean
numberim	all	106	0.0898125707655309	0.0078125	0.9921875	0.271834460776405	0.4891304347826
Remain	all	109	0.0727315441205261	0.015625	0.984375	0.362030665966436	0.4406779661016
Englishlan	all	109	0.0299129031275695	0.26953125	0.73046875	0.363553015812534	0.6186440677966
numberim	no.car	98	0.0825966646148233	0.01171875	0.98828125	0.276280405627494	0.4787735849056
Remain	no.car	100	0.0983554695104804	0.015625	0.984375	0.3524195653157	0.4120370370370
Englishlan	no.car	100	0.0433034458889442	0.15234375	0.84765625	0.369610515536121	0.5995370370370

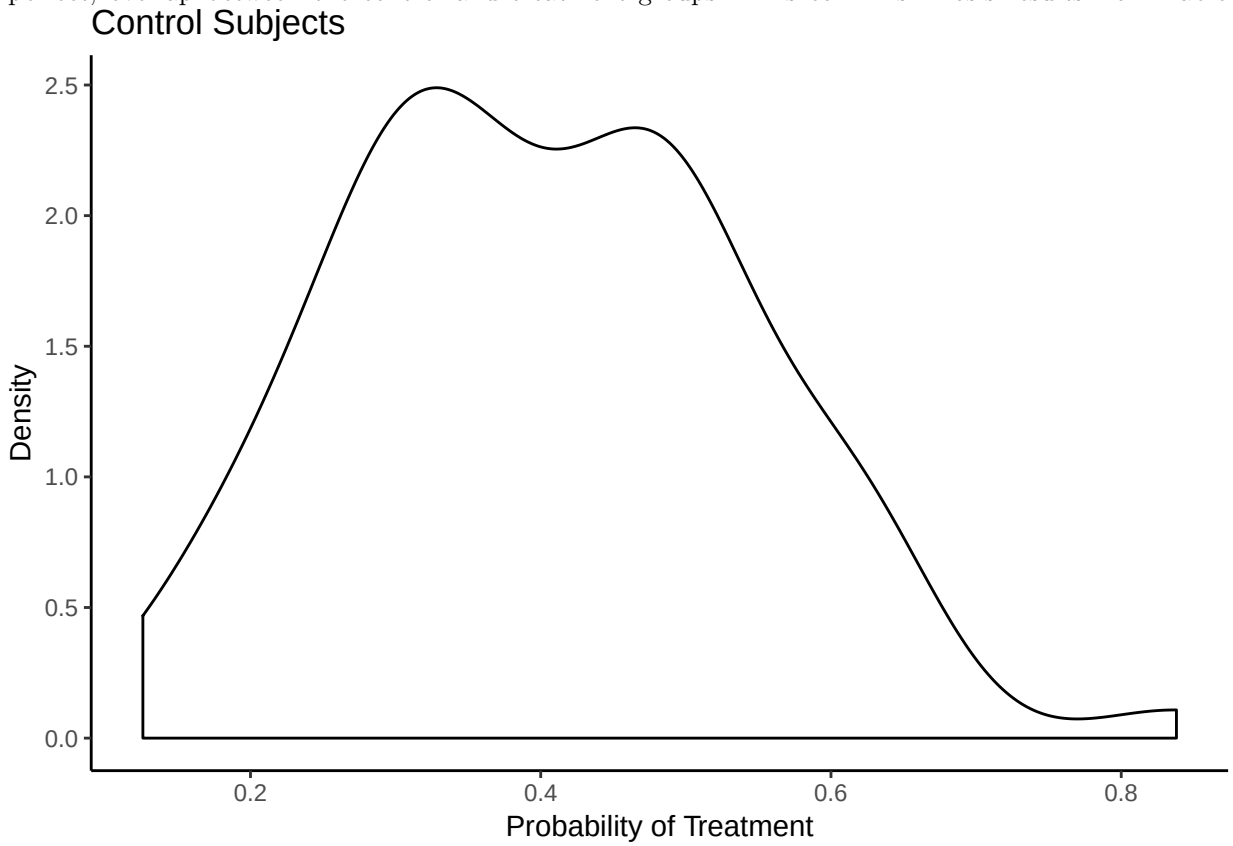
Table 2

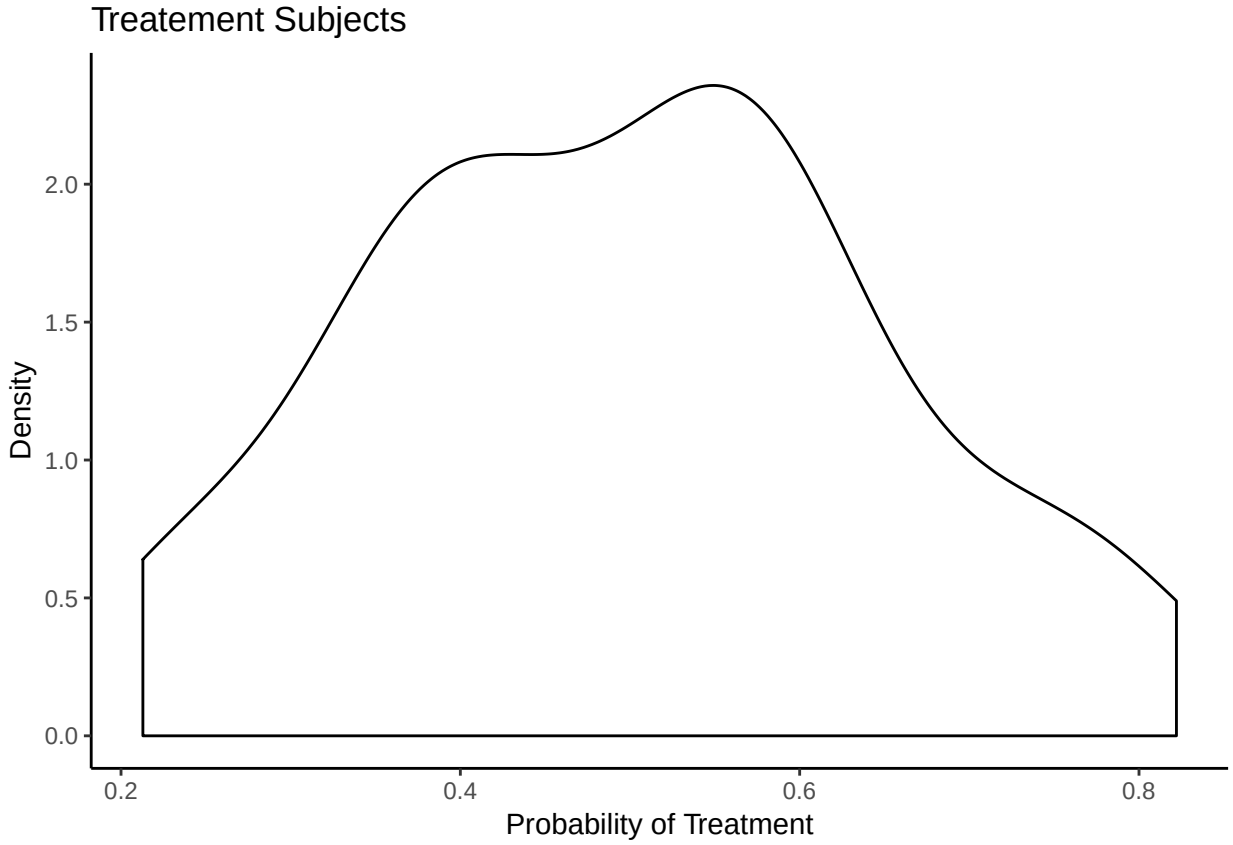
	treatment=0	treatment=1	std.diff	z
liberal	0.46596736	0.46903574	0.006136819	0.02994868
republican	0.16722986	0.18660218	0.050137789	0.24252154
obama.disapprove	0.27112609	0.29403953	0.049561295	0.23744501
ride.everyday	0.84975676	0.89973465	0.151578308	0.72285650
voted.2010	0.76522842	0.66018361	-0.237951502	-1.12123562
romney.voter	0.24430406	0.21542488	-0.066708640	-0.33702309
Hispanics.x	0.05815637	0.04865249	-0.070752759	-0.33457205
age	44.66036876	40.42895315	-0.353256170	-1.63407619
residency.new	8.21672601	7.07117516	-0.191389899	-0.90718118
hispanic.new	0.02819709	0.05102986	0.114907675	0.58292364
college	0.88598703	0.86471568	-0.064608656	-0.30233405
income.new	144724.04374230	138094.39974846	-0.087469407	-0.44455287
male	0.60445619	0.60165746	-0.005603986	-0.02692159
white	0.90962551	0.83356174	-0.238503801	-1.24864724

Extension

Enos argues that the treatment and control groups are very similar on a variety of demographic indicators. The balance test he performs in order to test this, however, is univariate. Propensity scores, described in section 10.3 of the textbook, allow us to test balance on all of the dimensions Enos uses simultaneously. The density plots below show propensity scores. They demonstrate that there is a substantial, but not

perfect, overlap between the control and treatment groups. This confirms Enos's results from Table 2.





Bibliography

Enos, Ryan. (2014). "Causal effect of intergroup contact on exclusionary attitudes." *Proceedings of the National Academy of Sciences*, 111(10): 3669-3704.