**\*\*\* Stata code**

**\*\*\* ANES Cumulative Data File**

\*\*\* Non-Hispanic Whites

tab VCF0105a

gen NHwhite = VCF0105a

recode NHwhite (2/7=0)

tab VCF0105a NHwhite, mi

gen NHblack = 1 if VCF0105a==2

\*\*\* Thermometers by year

tabstat VCF0207 VCF0206, by(VCF0004)

tab1 VCF0207 VCF0206, mi

\*\*\* Keep only election years from 1964 to 2016

keep if VCF0004>=1964 & mod(VCF0004,4)==0

tab VCF0004

\*\*\* Thermometers by post-election

tabstat VCF0207 VCF0206 if VCF0013==0, by(VCF0004)

tabstat VCF0207 VCF0206 if VCF0013==1, by(VCF0004)

drop if VCF0013==0 & VCF0004>=1972

\*\*\* Tmermometer differences

sum VCF0207 VCF0206

gen thermoWB = VCF0207 - VCF0206

sum thermoWB

tab thermoWB, mi

sum thermoWB if thermoWB==.

tab1 VCF0207

tab1 VCF0207 if VCF0207==97 & VCF0206==97

di 2276/29204 // percentage that selected 97 for both thermometers

recode thermoWB (-100/-1=1) (0/100=0), gen(thermoB)

recode thermoWB (-100/-1 1/100=0) (0=1), gen(thermoEQ)

recode thermoWB (-100/0=0) (1/100=1), gen(thermoW)

tab1 thermoB thermoEQ thermoW

di 4453 + 12442 + 12080

tabstat thermoWB, by(VCF0004)

\*\*\* Thermometers within 3 is equal

recode thermoWB (-100/-4=1) (-3/100=0), gen(thermoB3)

recode thermoWB (-100/-4 4/100=0) (-3/3=1), gen(thermoEQ3)

recode thermoWB (-100/3=0) (4/100=1), gen(thermoW3)

tab1 thermoB3 thermoEQ3 thermoW3

di 4301 + 12752 + 11922

sum thermoWB if thermoB3 ==1

sum thermoWB if thermoB3 ==0

sum thermoWB if thermoEQ3==1

sum thermoWB if thermoEQ3==0

sum thermoWB if thermoW3 ==1

sum thermoWB if thermoW3 ==0

\*\*\* Vote Republican

tab VCF0704a

gen voteGOP = VCF0704a - 1

tab VCF0704a voteGOP, mi

\*\*\* Percentages

svyset [pw=VCF0009x] // face-to-face only // See: https://electionstudies.org/wp-content/uploads/2018/12/anes\_timeseries\_cdf\_codebook\_app.txt

svy, subpop(NHwhite): prop thermoB3 thermoEQ3 thermoW3, over(VCF0004)

svy, subpop(NHblack): prop thermoB3 thermoEQ3 thermoW3, over(VCF0004)

svy, subpop(NHwhite): prop voteGOP if thermoB==1, over(VCF0004)

svy, subpop(NHwhite): prop voteGOP if thermoEQ==1, over(VCF0004)

svy, subpop(NHwhite): prop voteGOP if thermoW==1, over(VCF0004)

tabstat thermoB3 thermoEQ3 thermoW3 if NHwhite==1 & VCF0009x!=0, by(VCF0004) stats(n)

tabstat thermoB3 thermoEQ3 thermoW3 if NHblack==1 & VCF0009x!=0, by(VCF0004) stats(n)

\*\*\* Thermometers missing data

tab1 VCF0207 VCF0206, mi

bysort VCF0004: tab thermoWB, mi

**# R plots below**

**# ANES CDF 1964-2016 White ingroup favoring [Whites]**

#pdf(file="E:Thermo19642016w.pdf", width=8, height=4.5)

svg("E:Thermo19642016w.svg", width=8, height=4.5, pointsize=15)

par(mfrow=c(1,1), mai=c(0.5,0.5,0.5,0.5), oma=c(1.5,0,0,0))

range <- c(seq(1964,2016,by=4))

coef.b3 <- 100\*c(0.0358712,0.0546407,0.0292524,0.0778084,0.0469442,0.0932091,0.0805833,0.104756,0.0691518,0.0970125,0.1447546,0.1061146,0.0449515,0.1019953)

coef.e3 <- 100\*c(0.2474378,0.3166168,0.3466956,0.2957218,0.3418955,0.39747,0.362241,0.4812778,0.5720811,0.5226445,0.5241232,0.5712193,0.5622003,0.5781913)

coef.w3 <- 100\*c(0.7166911,0.6287425,0.624052,0.6264699,0.6111603,0.5093209,0.5571757,0.4139662,0.3587671,0.380343,0.3311221,0.3226661,0.3928482,0.3198134)

n <- c("1366","1336","1846","1601","1129","1502","1302","1674","1158","1107","735","1016","852","699")

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="White Americans")

rect(range-2,0,range+2,coef.b3,col="black", border=F)

rect(range-2,coef.b3,range+2,coef.b3+coef.e3,col="gray85", border=F)

rect(range-2,coef.b3+coef.e3,range+2,100,col="white", border=F)

axis(2, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(4, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=format(seq(1964,2016,4),2), mgp=c(0,0.5,0), cex.axis=0.8, tick=FALSE)

text(1990,2.5, "Rated Blacks >3 above Whites", col="white", cex=0.8)

text(1990, 25, "Rated Whites w/in 3 of Blacks", col="black", cex=0.8)

text(1990, 80, "Rated Whites >3 above Blacks", col="black", cex=0.8)

text(range, 100, n, cex=0.6, pos=1)

box(lwd=2.5)

mtext("Data source: ANES. 2019. American National Election Studies Time Series Cumulative Data File 1948-2016.\nNon-Hispanic Whites. Excludes web sample. Sample sizes in the top inside.", side=1, adj=0.5, outer=T, cex=0.65, line=0)

dev.off()

**# ANES CDF 1964-2016 ingroup favoring [Blacks]**

pdf(file="E:Thermo19642016b.pdf",width=8, height=4.5)

par(mfrow=c(1,1), mai=c(0.5,0.5,0.5,0.5), oma=c(1.5,0,0,0))

range <- c(seq(1964,2016,by=4))

coef.b3 <- 100\*c(0.6064516,0.6853147,0.7254902,0.7279412,0.5194805,0.4196891,0.5230769,0.593922,0.4326311,0.420675,0.5310695,0.4267399,0.5173422,0.5093885)

coef.e3 <- 100\*c(0.3354839,0.2657343,0.254902,0.245098,0.4090909,0.4404145,0.4102564,0.3317131,0.4756533,0.4856304,0.4108349,0.5145953,0.4334806,0.4825973)

coef.w3 <- 100\*c(0.0580645,0.048951,0.0196078,0.0269608,0.0714286,0.1398964,0.0666667,0.0743649,0.0917156,0.0936946,0.0580956,0.0586648,0.0491772,0.0080142)

n <- c("155","143","204","160","154","193","195","271","153","148","151","482","470","100")

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="Black Americans")

rect(range-2,0,range+2,coef.b3,col="black", border=F)

rect(range-2,coef.b3,range+2,coef.b3+coef.e3,col="gray85", border=F)

rect(range-2,coef.b3+coef.e3,range+2,100,col="white", border=F)

axis(2, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(4, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=format(seq(1964,2016,4),2), mgp=c(0,0.5,0), cex.axis=0.8, tick=FALSE)

text(1990,25, "Rated Blacks >3 above Whites", col="white", cex=0.8)

text(1990,75, "Rated Whites w/in 3 of Blacks", col="black", cex=0.8)

text(1990,96, "Rated Whites >3 above Blacks", col="black", cex=0.8)

text(range, 0, n, cex=0.6, pos=3, col="white")

box(lwd=2.5)

mtext("Data source: ANES. 2019. American National Election Studies Time Series Cumulative Data File 1948-2016.\nNon-Hispanic Blacks. Excludes web sample. Sample sizes in the bottom inside.", side=1, adj=0.5, outer=T, cex=0.65, line=0)

dev.off()

**# Combined**

pdf(file="E:Thermo19642016.pdf",width=14, height=7)

#svg("E:Thermo19642016.svg", width=14, height=5, pointsize=15)

par(mfrow=c(1,2), mai=c(0.85,0.5,0.5,0.5), oma=c(1,0,0,0))

range <- c(seq(1964,2016,by=4))

coef.b3 <- 100\*c(0.0358712,0.0546407,0.0292524,0.0778084,0.0469442,0.0932091,0.0805833,0.104756,0.0691518,0.0970125,0.1447546,0.1061146,0.0449515,0.1019953)

coef.e3 <- 100\*c(0.2474378,0.3166168,0.3466956,0.2957218,0.3418955,0.39747,0.362241,0.4812778,0.5720811,0.5226445,0.5241232,0.5712193,0.5622003,0.5781913)

coef.w3 <- 100\*c(0.7166911,0.6287425,0.624052,0.6264699,0.6111603,0.5093209,0.5571757,0.4139662,0.3587671,0.380343,0.3311221,0.3226661,0.3928482,0.3198134)

n <- c("1366","1336","1846","1601","1129","1502","1302","1674","1158","1107","735","1016","852","699")

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="White Americans")

rect(range-2,0,range+2,coef.b3,col="black", border=F)

rect(range-2,coef.b3,range+2,coef.b3+coef.e3,col="gray85", border=F)

rect(range-2,coef.b3+coef.e3,range+2,100,col="white", border=F)

axis(2, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(4, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=format(seq(1964,2016,4),2), mgp=c(0,0.5,0), cex.axis=0.8, tick=FALSE)

text(1990,2.5, "Rated Blacks >3 above Whites", col="white", cex=0.8)

text(1990, 25, "Rated Whites w/in 3 of Blacks", col="black", cex=0.8)

text(1990, 80, "Rated Whites >3 above Blacks", col="black", cex=0.8)

text(range, 100, n, cex=0.6, pos=1)

box(lwd=2.5)

range <- c(seq(1964,2016,by=4))

coef.b3 <- 100\*c(0.6064516,0.6853147,0.7254902,0.7279412,0.5194805,0.4196891,0.5230769,0.593922,0.4326311,0.420675,0.5310695,0.4267399,0.5173422,0.5093885)

coef.e3 <- 100\*c(0.3354839,0.2657343,0.254902,0.245098,0.4090909,0.4404145,0.4102564,0.3317131,0.4756533,0.4856304,0.4108349,0.5145953,0.4334806,0.4825973)

coef.w3 <- 100\*c(0.0580645,0.048951,0.0196078,0.0269608,0.0714286,0.1398964,0.0666667,0.0743649,0.0917156,0.0936946,0.0580956,0.0586648,0.0491772,0.0080142)

n <- c("155","143","204","160","154","193","195","271","153","148","151","482","470","100")

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="Black Americans")

rect(range-2,0,range+2,coef.b3,col="black", border=F)

rect(range-2,coef.b3,range+2,coef.b3+coef.e3,col="gray85", border=F)

rect(range-2,coef.b3+coef.e3,range+2,100,col="white", border=F)

axis(2, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(4, at=seq(0,100,10), label=seq(0,100,10), mgp=c(0,0.75,0), cex.axis=0.8, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=format(seq(1964,2016,4),2), mgp=c(0,0.5,0), cex.axis=0.8, tick=FALSE)

text(1990,25, "Rated Blacks >3 above Whites", col="white", cex=0.8)

text(1990,75, "Rated Whites w/in 3 of Blacks", col="black", cex=0.8)

text(1990,96, "Rated Whites >3 above Blacks", col="black", cex=0.8)

text(range, 0, n, cex=0.6, pos=3, col="white")

box(lwd=2.5)

mtext("Data source: ANES. 2019. American National Election Studies Time Series Cumulative Data File 1948-2016. Non-Hispanic Whites and Non-Hispanic Blacks. Excludes web sample. Sample sizes in the top inside or bottom inside.\nPercentages do not include participants who did not report thermometer ratings for both groups. Non-response in the cumulative data file, by year: 3% (1964), 4% (1968), 8% (1972), 5% (1976), 5% (1980), 7% (1984), 5% (1988), 4% (1992),\n4% (1996), 8% (2000), 3% (2004), 3% (2008), 1% (2012), 2% (2016).", side=1, adj=0.5, outer=T, cex=0.65, line=-0.6)

dev.off()

**# Association with GOP vote (grouped by thermometers)**

# win.metafile(filename="F:Plot1.wmf",width=12.5,height=3,pointsize=13)

pdf(file="E:WhiteVote19642016.pdf",width=15, height=4)

svg("E:WhiteVote19642016.svg", width=15, height=4.5, pointsize=15)

range <- c(seq(1964,2016,by=4))

coef.b <- 100\*c(0.4146341,0.5,0.4285714,0.4908257,0.3870968,0.5701754,0.45,0.3600399,0.4502257,0.4756496,0.5077841,0.5847138,0.3253251,0.1158811)

cilo.b <- 100\*c(0.3143306,0.407679,0.3283497,0.4169806,0.2757486,0.505722,0.3753964,0.3008441,0.349832,0.3918828,0.4226154,0.4976677,0.193776,0.0654845)

cihi.b <- 100\*c(0.522552,0.592321,0.5350162,0.5650733,0.511644,0.6323345,0.5269223,0.4238227,0.5548434,0.5608093,0.5925034,0.6667759,0.4917124,0.1968912)

coef.w <- 100\*c(0.3607955,0.6157113,0.7490683,0.5374424,0.6495536,0.6540541,0.6526104,0.5066813,0.4985369,0.5823809,0.6386773,0.6300463,0.6603714,0.7272876)

cilo.w <- 100\*c(0.3363463,0.5845263,0.7275211,0.5112481,0.618026,0.6258469,0.6227823,0.4733741,0.4551386,0.536332,0.5848456,0.5831322,0.6110433,0.6658238)

cihi.w <- 100\*c(0.3859881,0.6459731,0.7694516,0.5634316,0.679827,0.6812178,0.681287,0.5399292,0.5419572,0.6270366,0.6892378,0.6746266,0.706449,0.7811621)

coef.e <- 100\*c(0.3372549,0.5636364,0.6608696,0.5653207,0.6255319,0.6541176,0.5958702,0.4752688,0.4900748,0.5365889,0.5802714,0.5200724,0.5663329,0.6100207)

cilo.e <- 100\*c(0.2978975,0.5222514,0.6299524,0.5272625,0.5813035,0.6218097,0.5588255,0.4442791,0.4548526,0.5017272,0.5379223,0.4833803,0.5229942,0.5636638)

cihi.e <- 100\*c(0.3790052,0.6041536,0.6904728,0.6026241,0.6677586,0.6850635,0.6318535,0.50645,0.5253958,0.5710966,0.6214703,0.5565493,0.6086802,0.6544717)

year.labels=c("64","68","72","76","80","84","88","92","96","00","04","08","12","16")

par(mfrow=c(1,3), oma=c(0,0,0,0))

par(mai=c(0.6,0.4,0.4,0))

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="Whites who rated Whites >3 above Blacks", cex.main=1.5)

rect(1900,0,2020,100,col="gray85")

rect(range-2,0,range+2,coef.w,col="white", border=T)

segments(range, cilo.w, range, cihi.w, col="black", lwd=1.3)

#abline(v=seq(from=1962, to=2018, by=4),col="black", lwd=1)

axis(2, at=seq(0,100,20), label=seq(0,100,20), mgp=c(0,0.75,0), cex.axis=1.2, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=year.labels, mgp=c(0,0.5,0), cex.axis=1.2, tick=FALSE)

text(1990, 95, "Columns indicate % of two-party vote\nfor the Republican presidential candidate", cex=1.25, pos=1, col="black")

box(lwd=2)

par(mai=c(0.6,0.2,0.4,0.2))

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="Whites who rated Whites w/in 3 of Blacks", cex.main=1.5)

rect(1900,0,2020,100,col="gray85")

rect(range-2,0,range+2,coef.e,col="gray70", border=T)

segments(range, cilo.e, range, cihi.e, col="black", lwd=1.3)

#abline(v=seq(from=1962, to=2018, by=4),col="black", lwd=1)

axis(1, at=seq(1964,2016,4), label=year.labels, mgp=c(0,0.5,0), cex.axis=1.2, tick=FALSE)

text(1990, 95, "Columns indicate % of two-party vote\nfor the Republican presidential candidate", cex=1.25, pos=1, col="black")

box(lwd=2)

par(mai=c(0.6,0,0.4,0.4))

plot(NULL, axes=F, xlab="", ylab="", xlim=c(1964,2016), ylim=c(0,100), yaxs="i", main="Whites who rated Blacks >3 above Whites", cex.main=1.5)

rect(1900,0,2020,100,col="gray85")

rect(range-2,0,range+2,coef.b,col="black", border=T)

segments(range, cilo.b, range, cihi.b, col="black", lwd=1.3)

segments(range, coef.b, range, cilo.b, col="gray85", lwd=1.3)

#abline(v=seq(from=1962, to=2018, by=4),col="black", lwd=1)

segments(range-2, 0, range-2, coef.b, col="gray85", lwd=1.3)

axis(4, at=seq(0,100,20), label=seq(0,100,20), mgp=c(0,0.75,0), cex.axis=1.2, las=1, tick=FALSE)

axis(1, at=seq(1964,2016,4), label=year.labels, mgp=c(0,0.5,0), cex.axis=1.2, tick=FALSE)

text(1990, 95, "Columns indicate % of two-party vote\nfor the Republican presidential candidate", cex=1.25, pos=1, col="black")

box(lwd=2)

mtext("Data source: ANES. 2019. American National Election Studies Time Series Cumulative Data File 1948-2016. Non-Hispanic Whites. Excludes web sample. Error bars are for 83% confidence intervals.", side=1, adj=0.5, outer=T, cex=0.65, line=-2)

dev.off()

**# Association with GOP vote (grouped by year)**

pdf(file="E:WhiteVote19642016three.pdf",width=15, height=4)

svg("E:WhiteVote19642016three.svg", width=10, height=4.5, pointsize=15)

coef.b <- 100\*c(0.4146341,0.5,0.4285714,0.4908257,0.3870968,0.5701754,0.45,0.3600399,0.4502257,0.4756496,0.5077841,0.5847138,0.3253251,0.1158811)

cilo.b <- 100\*c(0.3143306,0.407679,0.3283497,0.4169806,0.2757486,0.505722,0.3753964,0.3008441,0.349832,0.3918828,0.4226154,0.4976677,0.193776,0.0654845)

cihi.b <- 100\*c(0.522552,0.592321,0.5350162,0.5650733,0.511644,0.6323345,0.5269223,0.4238227,0.5548434,0.5608093,0.5925034,0.6667759,0.4917124,0.1968912)

coef.w <- 100\*c(0.3607955,0.6157113,0.7490683,0.5374424,0.6495536,0.6540541,0.6526104,0.5066813,0.4985369,0.5823809,0.6386773,0.6300463,0.6603714,0.7272876)

cilo.w <- 100\*c(0.3363463,0.5845263,0.7275211,0.5112481,0.618026,0.6258469,0.6227823,0.4733741,0.4551386,0.536332,0.5848456,0.5831322,0.6110433,0.6658238)

cihi.w <- 100\*c(0.3859881,0.6459731,0.7694516,0.5634316,0.679827,0.6812178,0.681287,0.5399292,0.5419572,0.6270366,0.6892378,0.6746266,0.706449,0.7811621)

coef.e <- 100\*c(0.3372549,0.5636364,0.6608696,0.5653207,0.6255319,0.6541176,0.5958702,0.4752688,0.4900748,0.5365889,0.5802714,0.5200724,0.5663329,0.6100207)

cilo.e <- 100\*c(0.2978975,0.5222514,0.6299524,0.5272625,0.5813035,0.6218097,0.5588255,0.4442791,0.4548526,0.5017272,0.5379223,0.4833803,0.5229942,0.5636638)

cihi.e <- 100\*c(0.3790052,0.6041536,0.6904728,0.6026241,0.6677586,0.6850635,0.6318535,0.50645,0.5253958,0.5710966,0.6214703,0.5565493,0.6086802,0.6544717)

na.list <- rep\_len(0,14)

range <- 1:56

pe <- c(rbind(coef.w,coef.e,coef.b,na.list))

lo <- c(rbind(cilo.w,cilo.e,cilo.b,na.list))

hi <- c(rbind(cihi.w,cihi.e,cihi.b,na.list))

white.range <- seq(1, 54, by=4)

equal.range <- seq(2, 55, by=4)

black.range <- seq(3, 56, by=4)

par(mai=c(1,0.5,0.5,0.5))

plot(NULL, axes=F, xlab="", ylab="", xlim=c(0,57), ylim=c(0,100), xaxs="i", yaxs="i", main="Percentage two-party vote for the Republican presidential candidate", cex.main=1.25)

rect(0,0,58,100,col="gray90")

rect(range,0,range+1,pe,col=rep\_len(c("white","gray70","black",NA),56), border=T, lwd=1)

segments(white.range+0.5, cilo.w, white.range+0.5, cihi.w, col="black", lwd=1.3)

segments(equal.range+0.5, cilo.e, equal.range+0.5, cihi.e, col="black", lwd=1.3)

segments(black.range+0.5, cilo.b, black.range+0.5, cihi.b, col="black", lwd=1.3)

segments(black.range+0.5, coef.b, black.range+0.5, cilo.b, col="gray85", lwd=1.3)

axis(2, at=seq(0,100,20), label=seq(0,100,20), mgp=c(0,0.5,0), cex.axis=1, las=1, tick=FALSE)

axis(4, at=seq(0,100,20), label=seq(0,100,20), mgp=c(0,0.5,0), cex.axis=1, las=1, tick=FALSE)

year.labels=c("1964","1968","1972","1976","1980","1984","1988","1992","1996","2000","2004","2008","2012","2016")

axis(1, at=equal.range+0.5, label=year.labels, mgp=c(0,0.5,0), cex.axis=1, tick=FALSE)

box(lwd=2)

mtext("Data source: ANES. 2019. American National Election Studies Time Series Cumulative Data File 1948-2016. Non-Hispanic Whites. Excludes web sample. Error bars are for 83% confidence intervals.\nWhite columns = Whites who rated Whites >3 above Blacks\nGray columns = Whites who rated Whites w/in 3 of Blacks\nBlack columns = Whites who rated Blacks >3 above Whites", side=1, adj=0.5, outer=T, cex=0.65, line=-1.2)

dev.off()