The Great Gun Grab

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Abstract

In recent years in the US there have been a number of mass shootings in middle schools, high schools and colleges. These shootings have cost a large number of fatalities of Americans young people. After each shooting, the liberals come out with a call to ban guns, or certain types of guns. Americans have been in love with their guns since the American Revolution. In fact, the colonists only won because they possessed firearms. Gun owners will not willingly give up their guns. In this paper, we want to look at various ways liberals can get their way and the potential consequences.

Keywords: gun control, confiscation, liberals, NATO

1.0 Introduction

In recent years in the US there have been a number of mass shootings in middle schools, high schools and colleges. These shootings have cost a large number of fatalities of Americans young people. After each shooting, the liberal politicians come out with a call to “ban guns”, or certain types of guns. They are pushing for new legal measure to implement gun control. Americans have been in love with their guns since the American Revolution. Very many gun owners will not willingly give up their guns. In this paper, we want to look at various ways liberals can get their way and the potential consequences.

There have already been groups, including many law enforcement agencies, that have come flat out and said “NO! we will not obey those laws.” In response, the liberals have come up with the idea of confiscating guns if necessary. The same people have said the same thing “NO!” The liberals’ next idea was to have law enforcement officials confiscate guns. Law enforcement agencies across the country have expressed their feelings about this, “NO! Law enforcement will not act against the American people.” Unfortunately, in a few Northeastern states, laws have been passed to ban guns and gun confiscation has been done in those states. Liberals are trying to pass such laws in other states. We have to expect that many local law enforcement personnel will quit police work rather than trying to force their neighbors to give up their guns.

The liberals' next idea may well try to use the military to confiscate guns. There is a clause in the Constitution that expressly forbids the use of American Military Forces to take action against US citizens. If law enforcement can't or won't do the job, perhaps other alternatives will be tried. Try using the state militia to confiscate guns. This will be like the American Civil War all over again, brother against brother. We can expect some militia members to resign rather than fight against American citizens.

There is potentially one other source that could come in and confiscate Americans guns. That would be to call in NATO Forces to carry out the confiscation. This will not be as simple as a NATO truck pulling up at your door and saying "Guns please". With the American attitude that they will not give up their guns, there is a very great chance that shots will be fired between NATO Forces and American gun owners. Many believe that the first shot fired will be the first shot of the Second American Revolution. Let us explore how that option might work out.

2.0 Gun Owner – NATO ODE Model

Consider the mathematical model:

$$G = a_1G/(1+d_1N) - a_{gn}GN/(1+d_2N) - b_1G^2 = 0 = G(gn) \quad (1)$$

$$N = a_2N/(1+d_3G) - a_{gn}GN/(1+d_2N) - b_2N^2 = 0 = N(gn) \quad (2)$$

The populations G(t) and N(t) represent the number of gun owners and NATO forces respectively. The parameters are all assumed positive and their description is given in Table 1a.

Table 1a List of Parameters

Symbol	Meaning
a_1	Growth rate of gun owners
a_2	Growth rate of NATO forces
a_{gn}	Maximum per capita loss in N
b_1	Population loss in G
b_2	Population loss in N
d_1	Effectiveness of N in disrupting G
d_2	Resilience of G to N
d_3	Effectiveness of G in disrupting N

The values chosen for the parameters in the model are shown Table1b.

Table 1b Values of Parameters

a_1	a_2	a_{gn}	b_1	b_2	d_1	d_2	d_3
2	2	2	.5	.5	2	2	3

2.1 Gun Owner NATO Equal Populations

The first question to be asked is how can you tell what the population of gun owners is? Because every time a gun owner buys a gun from a gun dealer, their name goes into a federal data base of registered gun owners.

Reconsider our original mathematical model.

$$G = a_1G/(1+d_1N) - a_{gn}GN/(1+d_2N) - b_1G^2 = 0 = G(gn) \quad (3)$$

$$N = a_2N/(1+d_3G) - a_{gn}GN/(1+d_2N) - b_2N^2 = 0 = N(gn) \quad (4)$$

Since these are second order equations, to solve them we need to form the Jacobian and solve the Jacobian for equilibrium points.

The Jacobian is formed as:

$$J = \begin{vmatrix} \partial G/\partial G & \partial G/\partial N \\ \partial N/\partial G & \partial N/\partial N \end{vmatrix}$$

Taking the partial derivatives, substituting values for parameter, the Jacobian becomes:

$$J = \begin{vmatrix} G & 4G - 2N/(1+2N)^2 \\ -6N - 2N/(1+2N) & 2/(1+3G) - 2N/(1+2N) - N \end{vmatrix}$$

Now we solve the Jacobian for equilibrium points. We do that using the Maple CAS.

2.1.1 Equilibrium Points

The real valued equilibrium points are:

{G = 0., N = 0.},

{G = 0., N = 4.},

{G = 4., N = 0.},

{G = .4891955799, N = .6319394087}

{G = -.4325627635, N = -.6082709305},

{G = -.4345884397, N = .1197573734},

{G = -3.074988235, N = -2.874675564}

The eigenvalues for these equilibrium points are:

(0, 2)

(-13/9+(1/27)*sqrt(3313), -13/9-(1/27)*sqrt(3313))

(4, 2/13)

(0.547422083000000e-1+2.69265409004048*I, 0.547422083000000e-1-2.69265409004048*I)

(-1.20049095525000+6.86103818723393*I, -1.20049095525000-6.86103818723393*I)

(.662503816667346, -2.00886916896735)

(6.48125503250000+10.0921214207669*I, 6.48125503250000-10.0921214207669*I)

2.1.2 Stability

In this section we use the eigenvalues to test for stability.

Equilibrium Points	Eigen Values	Node Type	Stability
{G = 0., N = 0.},	(0, 2)	Repelling	Unstable
{G = 0., N = 4.},	(-13/9+(1/27)*sqrt(3313), -13/9-(1/27)*sqrt(3313))}	Attracting	Asymptotically Stable
{G = 4., N = 0.},	(4, 2/13)	Repelling	Unstable
{G = .4891955799, N = .6319394087}	(.0.547422083000000+ 2.69265409004048*I, 0.547422083000000e-1- 2.69265409004048*I)	Repelling Spirals	Unstable
{G = -.4325627635, N = -.6082709305},	(-1.20049095525000+ 6.86103818723393*I, -1.20049095525000-	Attracting Spiral	Asymptotically Stable

	6.86103818723393*I)		
{G = -.4345884397, N = .1197573734},	(.662503816667346, -2.00886916896735	Saddle	Unstable
{G = -3.074988235, N = -2.874675564}	(6.48125503250000+ 10.0921214207669*I, 6.48125503250000- 10.0921214207669*I)	Repelling Spirals	Unstable

As can be expected, the introduction of foreign troops on American soil is having a destabilizing Influence.

2.2 NATO Forces Outnumber Gun Owners

Since there may be hundreds of thousands gun owner, it may be necessary to call in a few more NATO troops. Fifty percent more NATO may help.

$$G = a_1G/(1+d_1N*1.5) - a_{gn}GN*1.5/(1+d_2N*1.5) - b_1G^2 = 0 = G(gn) \quad (5)$$

$$N = a_2N*1.5/(1+d_3G) - a_{gn}GN*1.5/(1+d_2N*1.5) - b_2(N*1.5)^2 = 0 = N(gn) \quad (6)$$

This of course changes the Jacobian to:

$$J = \begin{vmatrix} 2/(1+3N) - 3/(1+3N) - G & -6G - 3G/(1+3N) \\ 9N - 3N/(1+3N) & 3/(1+3G) - (3G + 4.5GN)/(1+3N) - 1.5N \end{vmatrix}$$

2.2.1 Equilibrium Points

Using the Maple CAS the real valued equilibrium points are:

{G=0.,N=0.},

{G=0.,N=4.},

{G=4.,N=0.},

{G=0.5645952421,N=0.4242232302},

{G=-0.4331330963,N=-0.4050035932},

{G=-0.4344789342,N=0.07995039023}

{G=-3.409327263,N=-2.777186302},

2.2.2 Eigenvalues

Maple also gives the eigenvalues:

0, 0

-112/9+(128/27)*sqrt(7), -112/9-(128/27)*sqrt(7)

4, 0

-1.21987464895000+1.68955160788912*I, -1.21987464895000-1.68955160788912*I

-9.17015494741073, 15.4304003821107

.548710843003933, -1.60074941050393

6.01711066850000+10.8450561032619*I, 6.01711066850000-10.8450561032619*I

2.2.3 Stability

Equilibrium Points	Eigen values	Node Type	Stability
{G=0.,N=0.},	0, 0	Attracting	Asymptotically Stable
{G=0.,N=4.},	-112/9+(128/27)*sqrt(7), -112/9-(128/27)*sqrt(7)	Attracting	Asymptotically Stable
{G=4.,N=0.},	4, 0	Repelling	Unstable
{G=0.5645952421, N=0.4242232302},	-1.21987464895000+ 1.68955160788912*I, -1.21987464895000- 1.68955160788912*I	Attracting Spiral	Asymptotically Stable
{G=-0.4331330963, N=-0.4050035932},	-9.17015494741073, 15.4304003821107	Saddle	Unstable
{G=-0.4344789342, N=0.07995039023}	.548710843003933, -1.60074941050393	Saddle	Unstable

{G=-3.409327263, N=-2.777186302},	6.01711066850000+ 10.8450561032619*I, 6.01711066850000- 10.8450561032619*I	Repelling Spiral	Unstable

Adding fifty percent more foreign does not seem to affect the overall stability of the system.

3.0 Even More NATO Forces

Perhaps fifty percent more NATO will not get the job done or will not get it done fast enough. So, double the original number of NATO forces

$$G = a_1G/(1+d_1N*2) - a_{gn}GN*2/(1+d_2N*2) - b_1G^2 = 0 = G(gn) \quad (7)$$

$$N = a_2N*2/(1+d_3G) - a_{gn}GN*2/(1+d_2N*2) - b_2(N*2)^2 = 0 = N(gn) \quad (8)$$

This changes the Jacobian to:

$$J = \begin{vmatrix} -2N/(1+4N) - G & -8G - (16GN^2 - 12GN)/(1+4N)^2 \\ -12 - 4N/(1+4N) - 2N & 4/(1+3G) - 16GN^2 - 4GN)/(1+4N)^2 - 2N \end{vmatrix}$$

3.1.1 Equilibrium Points

The real valued equilibrium are:

{G = 0., N = 0.},

{G = 0., N = 4.},

{G = 4., N = 0.},

{G = .6081201589, N = .3186790244}

{G = -.4334163760, N = -.3035622451},

{G = -.4344240097, N = 0.6000496273e-1},

{G = -3.740679177, N = -2.699888708}

3.1.2 Eigenvalues

The eigenvalues for this are:

0, 0

-112/9+(128/27)*sqrt(7), -112/9-(128/27)*sqrt(7)

4, 0

-.846607010050000+1.71306981470163*I, -.846607010050000-1.71306981470163*I

-1.85240411231455, 4.78569675231455

.474822350546164, -1.37642690614616

5.61568442150000+11.5023751979819*I, 5.61568442150000-11.5023751979819*I

3.3.3 Stability

Equilibrium Point	Eigen values	Node Type	Stability
{G = 0., N = 0.},	0, 0	Attracting	Asymptotically Stable
{G = 0., N = 4.},	-112/9+(128/27)*sqrt(7), -112/9-(128/27)*sqrt(7)	Saddle	Unstable
{G = 4., N = 0.},	4, 0	Attracting	Stable
{G = .6081201589, N = .3186790244}	-.846607010050000 +1.71306981470163*I, -.846607010050000 -1.71306981470163*I	Attracting	Stable
{G = -.4334163760, N = -.3035622451},	-1.85240411231455, 4.78569675231455	Saddle	Unstable
{G = -.4344240097, N = .06000496273},	.474822350546164, -1.37642690614616	Saddle	Unstable
{G = -3.740679177,	5.61568442150000 +11.5023751979819*I,	Repelling Spiral	Unstable

N = -2.699888708}	5.61568442150000 -11.5023751979819*I		

As we add one-hundred percent more NATO forces, stability of the system remains constant, no more unstable nodes than before and no more stable nodes than before.

4.0 Conclusion

In this scenario where we call in NATO forces to confiscate the guns owned by registered gun owners, the increased number of NATO forces make no difference. This is not all that surprising. There are millions of Americans that, even though they are not gun owners, would see this as an invasion by foreign troops. As more and more NATO troops become involved, so will many more of the people that love America becomeinvolved. It is not inconceivable that such a war would wreak havoc on the US, and turn the US into a second rate country.

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