The Nuclear Dilemma

So, consider the 'prisoner's dilemma' at the bottom of the page. This was our reality during the "Cold War," a nuclear and ideological standoff between the United States and the Soviet Union (USSR). In several cases, mathematicians were called in as advisors to help decide how the government should approach this dilemma.

What are the incentives? What are the costs, and what are the benefits?

Are there dominant and dominated strategies in this game? If so, where are they?

Where is the Nash Equilibrium?What happens if these two countries reach a Nash Equilibrium?

How would you, personally, react if you were a policy maker faced with this dilemma? Why?

Knowing what you know about people, incentives, and prisoner's dilemma, how would you advise your country to react?

Is your advice the 'ethical' choice? Why, why not? Where do ethics and logical thinking collide in this dilemma?

USA (in italics)

	Attack!	*Do not attack*
Attack!	The quicker and harder we strike, the better off our chances are of winning a nuclear war. *The quicker and harder we strike, the better off our chances are of winning a nuclear war.*	We vanquish our evil enemy forever *We do not attack, and are attacked with full nuclear force by our enemies*
Do not attack	*We vanquish our evil enemy forever* We do not attack, and are attacked with full nuclear force by our enemies	If we do not attack, and they do not attack, we will both live in peace, but with animosity. *If we do not attack, and they do not attack, we will both live in peace, but with animosity*

The USSR (Soviet Union)