Assessing Civilian Willingness to Participate in On-line Political and Social Conflict

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Political Conflict On and Off-Line

- There has been significant attention in popular media on the role of technology in political conflict across the globe over the last few years
    - The Danish Cartoon Attacks
    - Russia/Estonia Conflict
    - Egypt
    - Iran
    - "Operation Payback" Anonymous attacks

Political Conflict On and Off Line

- Asymetric warfare and civilian attack is now a realistic and cost-effective attack vector
  - Restructuring power relationships between the individual and the nation-state

- Technology is a useful mechanism for several reasons
  - Near real time communication
  - Potential level of damage can be significant
  - Low cost
  - Anonymity
  - Minimal legal risk depending on activity

Preliminary Data and Model Statistical Model Building

- We are starting to get some preliminary data
  - Respondents are undergrad and grad students at a large Midwest university

- Also beginning to build some preliminary statistical models

- We're looking for other universities to collaborate with for cross-national comparisons

Different Social Dimensions Under Investigation as Related to Civilian Cyber Warrior Behavior

- **Civilian Cyber Warrior study is concentrating on..**

  - **Dependent variables**
    - Willingness to commit acts of cyber terror against another country

    - Willingness to commit acts of cyber terror against their own country

    - Willingness to commit acts of physical terror against another country

    - Willingness to commit acts of physical terror against their own country

Physical Attack Scale Against Foreign Country

- **Imagine that the country of Bagaria has recently promoted national policies and taken physical actions that have had negative consequences to the country that you most closely associate as your home country or homeland. These policies and actions have also resulted in significant hardships for the people in your home country.**

- **What actions do you think would be appropriate for you to take against Bagaria given their policies and physical actions against your home country? You may choose as many actions as you think the situation warrants. In this scenario, you may assume that you have the necessary skills to carry out any of the actions below.**

Do nothing � let your country work it out on its own	151	42.30%
Write a letter to government of Bagaria protesting their actions	192	53.78%
Participate in a protest at an anti-Bagaria rally	207	57.98%
Travel to Bagaria and protest at their country�s capitol building	90	25.21%
Travel to Bagaria and confront a Bagarian senior government official about their policies	68	19.05%
Travel to Bagaria and sneak into a military base to write slogans on buildings and vehicles	7	1.96%
Travel to Bagaria and physically damage an electrical power substation	8	2.24%
Travel to Bagaria and damage a government building with an explosive device	2	0.56%

Cyber Attack Against Foreign Country

- **Aside from physical activity, what on-line activities do you think would be appropriate for you to take against Bagaria given their policies and physical actions against your home country? You may choose as many actions as you think the situation warrants. In this scenario, you may assume that you have the necessary skills to carry out any of the actions below**

Do nothing � let your country work it out on its own	140	39.22%
Post a comment on a social networking website like Facebook or Twitter that criticizes the Bagarian government	272	76.19%
Deface the personal website of an important Bagarian government official	41	11.48%
Deface an important official Bagarian government website	39	10.92%
Compromise the server of a Bagarian bank and withdraw money to give to the victims of their policies and actions	18	5.04%
Search Bagarian government servers for secret papers that you might be able to use to embarrass the Bagarian government	35	9.80%
Compromise one or more Bagarian military servers and make changes that might temporarily affect their military readiness	24	6.72%
Compromise one of Bagaria�s regional power grids which results in a temporary power blackout in parts of Bagaria	11	3.08%
Compromise a nuclear power plant system that results in a small release of radioactivity in Bagaria	1	0.28%

Physical Attack Scale Against Homeland

- **Imagine that the country that you most closely associate as your home country or homeland has recently promoted national policies and taken physical actions that have had negative consequences to your home country. These policies and actions have resulted in significant hardships for the people in your home country.**
- **What actions do you think would be appropriate for you to take against your home country given their policies and physical actions? You may choose as many actions as you think the situation warrants. In this scenario, you may assume that you have the necessary skills to carry out any of the actions below.**

Do nothing � let your country work it out on its own	116	32.49%
Write a letter to your home country's government protesting their actions	248	69.47%
Participate in a protest against your home country at an anti-government rally	223	62.46%
Protest at your home country�s capitol building	194	54.34%
Confront one of your home contry's senior government official about their policies	107	29.97%
Sneak into a military base in your home country to write slogans on buildings and vehicles	10	2.80%
Physically damage an electrical power substation in your home country	6	1.68%
Damage a government building in your home country with an explosive device	3	0.84%

Cyber Attack Against Homeland

- **Aside from physical activity, what on-line activities do you think would be appropriate for you to take against your home country given their policies and physical actions? You may choose as many actions as you think the situation warrants. In this scenario, you may assume that you have the necessary skills to carry out any of the actions below.**

Do nothing � let your country work it out on its own	131	36.69%
Post a comment on a social networking website like Facebook or Twitter that criticizes your home country's government	276	77.31%
Deface the personal website of an important government official for your home country	47	13.17%
Deface an important official government website for your home country	43	12.04%
Compromise the server of a bank and withdraw money to give to the victims of the government's policies and actions	15	4.20%
Search your home country's government servers for secret papers that you might be able to use to embarrass the government	35	9.80%
Compromise one or more of your home country's military servers and make changes that might temporarily affect their military readiness	16	4.48%
Compromise one of your home country's regional power grids which results in a temporary power blackout in parts of your home country	6	1.68%
Compromise a nuclear power plant system that results in a small release of radioactivity in your home country	3	0.84%

Different Social Dimensions Under Investigation as Related to Civilian Cyber Warrior Behavior

- **Civilian Cyber Warrior study is concentrating on..**

- **Independent predictor variables including**
  - Level of skill
  - Level of emotive national identity
  - Level of nationalistic ethnocentrism
  - Level of antagonism towards outgroups
  - Level of belief in equality for groups
  - Level of piracy of software and media
  - Homeland – US or non-US declared as homeland
  - Demographics

Independent Variables

- **Emotive National identity**
  - I am proud to be a citizen of my home country.
  - In a sense I am emotionally attached to my home country and am emotionally affected by its actions.
  - Although at times I may not agree with the government, my commitment to my home country always remains strong.
  - I feel a great pride in the land that is my home country.
  - When I see my home country's flag flying I feel great.
  - The fact that I am a citizen of my home country is an important part of my identity.

Independent Variables

- **Belief in Group Equality**
  - It would be good if groups could be equal.
  - Group equality should be our ideal.
  - All groups should be given an equal chance in life.
  - We should do what we can to equalize conditions for different groups.
  - We would have fewer problems if we treated people more equally.
  - We should strive to make incomes as equal as possible.
  - No group should dominate in society.

Independent Variables

- Outgroup Antagonism
  - Some groups of people are simply inferior to other groups.
  - If certain groups stayed in their place, we would have fewer problems.
  - It's probably a good thing that certain groups are at the top and other groups are at the bottom.
  - Inferior groups should stay in their place.
  - Sometimes other groups must be kept in their place.

Independent Variables

- Nationalistic Ethnocentricity
  - Other countries should try to make their government as much like my home country's government as possible.
  - Generally, the more influence my home country has on other nations, the better off they are.
  - Foreign nations have done some very fine things but my home country does things in the best way of all.

- Age

- Gender

Independent Variables

- What country do they consider their homeland?
  - United States
  - Non-United States

- Pirating software or media
  - Two separate questions "How many times in the last 12 months have you knowingly downloaded, used, or made copies of… software … media"

- Computer Skill – Advanced Skill Factor
  - Using an operating system like Unix or Linux
  - Using a standard computer programming or scripting language like C++, Perl, or Java
  - Installing an operating system like Unix or Linux

Predicting Cyber Attack Against Homeland

- Using these independent variables in a multiple regression analysis, it appears that four factors predict cyber attacks against their homeland

  - Emotive national identity**
    - Negative relationship – less emotional identity equals more severe cyber attack magnitude

  - Homeland support*
    - Non-US homeland individuals more severe cyber attack than US homeland individuals

  - Willingness to perform a physical attack***
    - Positive relationship – more severe physical attack means more severe cyber attack

  - Pirate software or media***
    - Positive relationship – more piracy activity means more severe cyber attack

Predicting Physical Attack Against Homeland

- Using these independent variables in a multiple regression analysis, it appears that five factors predict physical attacks against their homeland

    - Advanced cyber skills*
        - Positive relationship - the higher the technical skills of the individual the more severe the physical attack

    - Homeland support*
        - US homeland individuals more severe physical attack than non-US homeland individuals

    - Willingness to perform a cyber attack***
        - Positive relationship – the more severe the physical attack means the more severe cyber attack contemplated

    - Pirate software or media***
        - Positive relationship – more piracy activity means more severe cyber attack

Predicting Physical Attack Against Homeland

- Using these independent variables in a multiple regression analysis, it appears that five factors predict physical attacks against their homeland

  - Outgroup antagonism*
    - Negative relationship - the lower level of antagonism towards groups not like themselves, the more severe the physical attack
    - That is, the more sympathetic to groups of people unlike themselves, the more severe the physical attack on their own homeland – "the activist effect"

Next Steps

- Work on building foreign country cyber and physical attack statistical models

- Continue to gather more data and refine analyses

- Encourage collaboration in collecting data from other universities both in the US and other countries
  - Other country data useful for cross-national comparisons

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