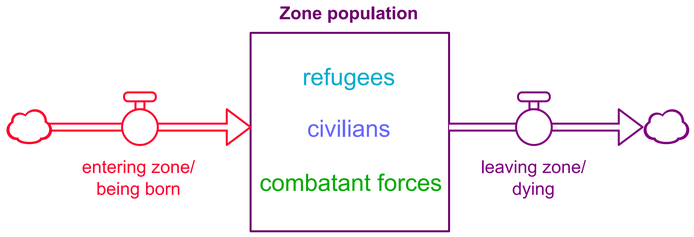
The Effects of Violence and Refugee Inflow on Troop Count in Stability Missions

Purpose

Modern military theory often points to a threshold troop count for stability missions above which there is a higher chance of success. However, the generally respected number of 22 stability mission troops per 1000 inhabitants within a specified and regulated safe zone is, in practice, rather arbitrary. Working with the traditionally suggested ratio as a guideline for a feasible range, this model tests the effects of violence and refugee inflow on stability force troop counts and attempts to assess the effectiveness of these missions over time.

Model

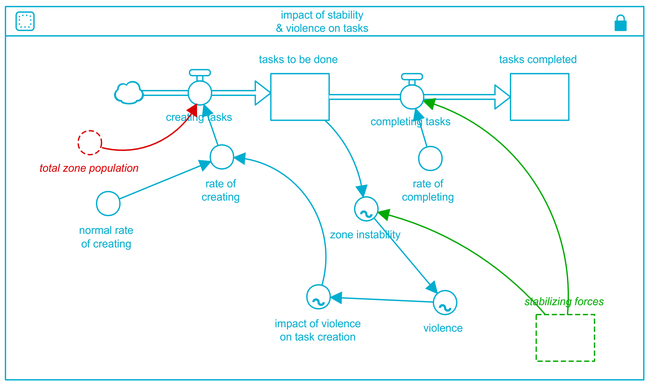


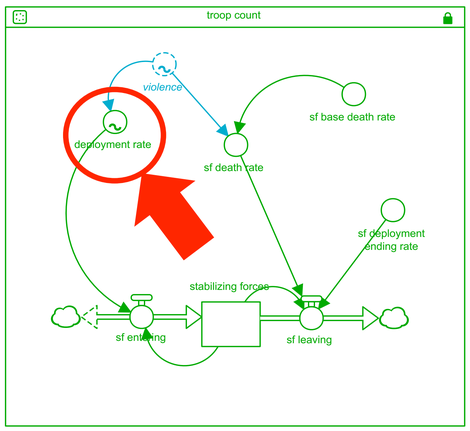
Total Zone Population = **refugees** + **civilians** + **combatant forces** *

Not shown above - violence affects rates at which people:

[Enter] **[Have children]** **[Die]**

*Refugees are people from a given radius who enter the zone, civilians are original residents of the zone, and combatant forces are insurgent groups or other organized groups intent on causing violence who enter the zone. This model assumes that once a person enters the zone, they do not leave.





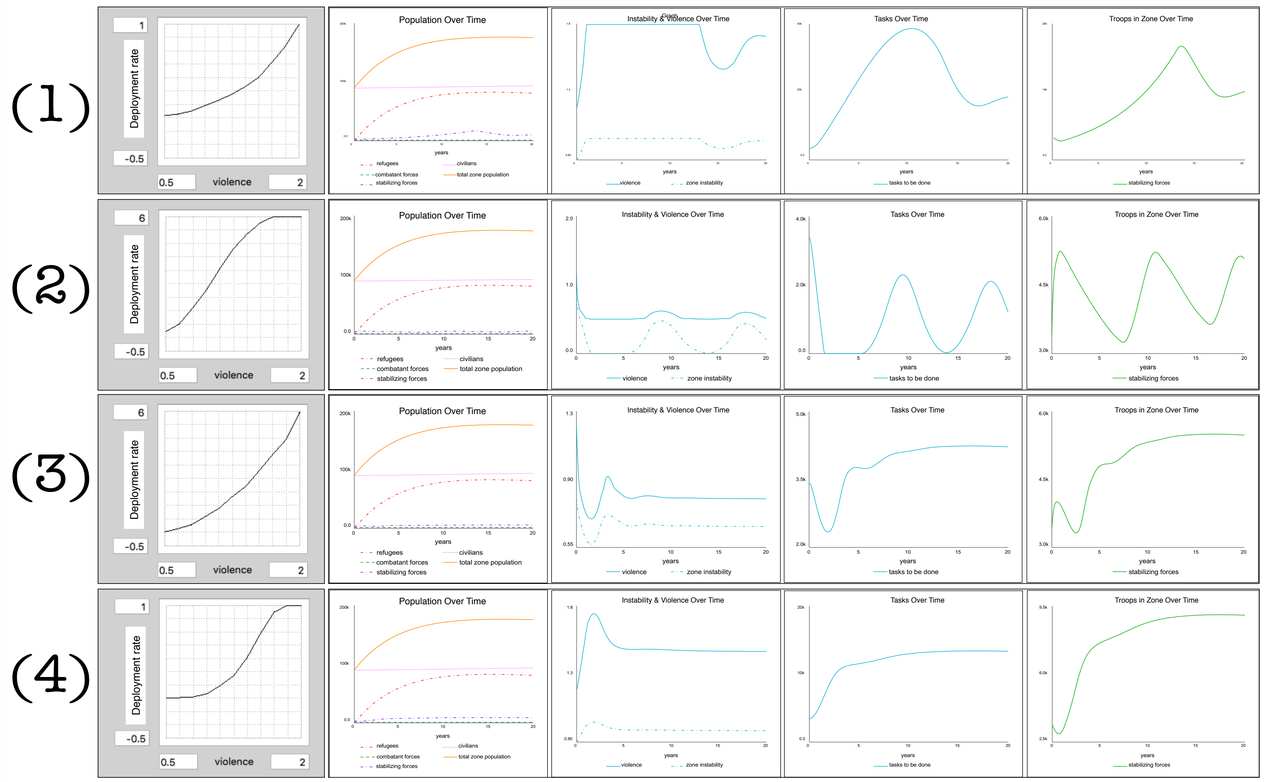
Because troop count is still calculated based on total population, this model develops a system of using total population to determine some number of tasks that must be completed in order to create stability. In real life, these tasks would include **border patrol, zone policing, entry screening, zone disarmament, reconnaissance, building infrastructure, aid distribution, and the maintenance of supply lines and a quick response force** (a military unit that can be deployed to a specific area within 30 minutes in case of emergency). If all these tasks are completed regularly, the levels of instability and violence should supposedly drop.

Instability ≅ # tasks / # troops available to complete tasks

The model works on a **surge basis**, meaning that rather than determining a specific gap between desired and current troop numbers, the model surges troops into the zone until it creates a drop in violence and instability.

Testing

Population, instability, and violence in response to troop deployment patterns

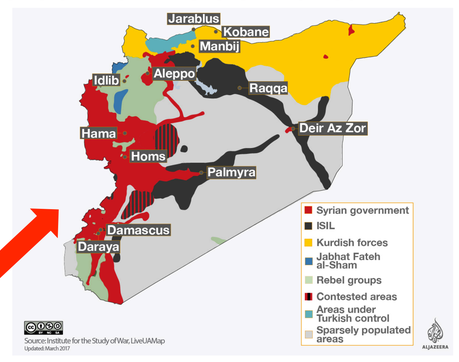


For the purposes of this project, the rate of violence in a zone is indicated by a number on a scale of .5 to 2. Anything below 1 indicates a reduction in instability and violence and therefore would result in a reduction in troops. The above graphs represent different troop deployment responses given an initial violence value of 1.2 based on initial stocks of 3400 tasks and 3400 troops. The number 3400 is based of an initial rough estimate of troops needed to stabilize and maintain a specific proposed zone around the city of Tartūs in Syria based on the current population of the region.

(1) **Slow surge increasing curve** – initial spike in violence; ineffective in sustainably reducing violence over time; lag time and intensity of response appear to be weak
(2) **Rapid surge s curve** – quickly suppresses violence initially; keeps violence levels low relatively constantly; results in an oscillating system of instability and troop levels that would realistically be expensive and difficult to coordinate
(3) **Rapid surge increasing curve** – quickly suppresses violence initially; keeps violence levels relatively low constantly; results in a dampening oscillating system and constant but high troop count
(4) **Slow surge s curve** – initial spike in violence; results in sustained high troop numbers and a more stable system, but a sustained higher level of violence as well

Conclusions, Implications, & Future Potential

- Conclusions?
  - Slow troop deployment leads to higher sustained violence levels
  - Rapid troop deployment leads to lower sustained violence levels
  - Sustained high troop level does not necessarily indicate sustained drop in violence
  - Lag time is an issue with a slower response time in troop deployment
- Implications?
  - **Stability missions take time to work and create lasting change**
  - **The most effective missions are likely the most expensive**
- Future Potential?
  - Syrian conflict – with multiple combatant groups and high rates of violence, what would be the most effective way to impose and maintain safe zones?



Sources & Acknowledgments

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"A Profile of the Modern Military." *War and Sacrifice in the Post-9/11 Era*. Pew Research Center, 2011.
Asrar, Shakeeb. "Syrian Civil War Map." *Al Jazeera*. 1 March 2017.
DeBruyne, Nese F. and Anne Leland. "American War and Military Operations Casualties: Lists and Statistics." Congressional Research Service, 2015.
Friedman, Jeffrey A. "Manpower and Counterinsurgency." *Security Studies*, Vol. 20, No. 4. Harvard Kennedy School, 2011.
"Syria Situation Report: February 24 – March 2." Institute for the Study of War, 2017.