DEMOCRACY AND ROBOTS

PERILS FOR POPULAR RULE IN THE AGE OF AI

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- New technologies are often greeted as panaceas.
- Later, it is found that they also possess liabilities.

- Often, fear of the new or novel is inflated
  - but sometimes not.
- Military automation is rapidly evolving as the mating of AI and machine technologies allows governments and even non-state actors to begin to remove humans from direct involvement in dirty, hostile environments typifying conflict.

- In a similar manner to the way that military automation promises to vastly lower the risks of battlefield casualties, it can also mitigate the costs of occupation.

- A second colonial era may emerge where technologically sophisticated societies dominate those unable to protect themselves from military robots.

- At the same time that military automation may facilitate occupation and suppression of foreign places and populations, it can do the same at home.

- The combination of industrial and military automation threatens democracy
  - Proletarian masses are no longer essential assets for national productivity or defense
    - decline in their value as workers and soldiers
  - Masses can more easily be held in check by AI-sponsored surveillance and interrogation, and by robotic police.

CAPITAL, LABOR AND WAR

- War is knowledge intensive.
  - Some thinking is required, even with machines to help (mechanization actually increases required brain input).
  - Technology seeks to increase the lethality, precision or range of harm, or to augment protection from harm.
    - Increasing lethality/precision/range, augments incentive to move humans off the battlefield
      - Norm to not intentionally harm (target) civilians
      - Most combatant casualties caused by indirect fires

CAPITAL, LABOR AND WAR II

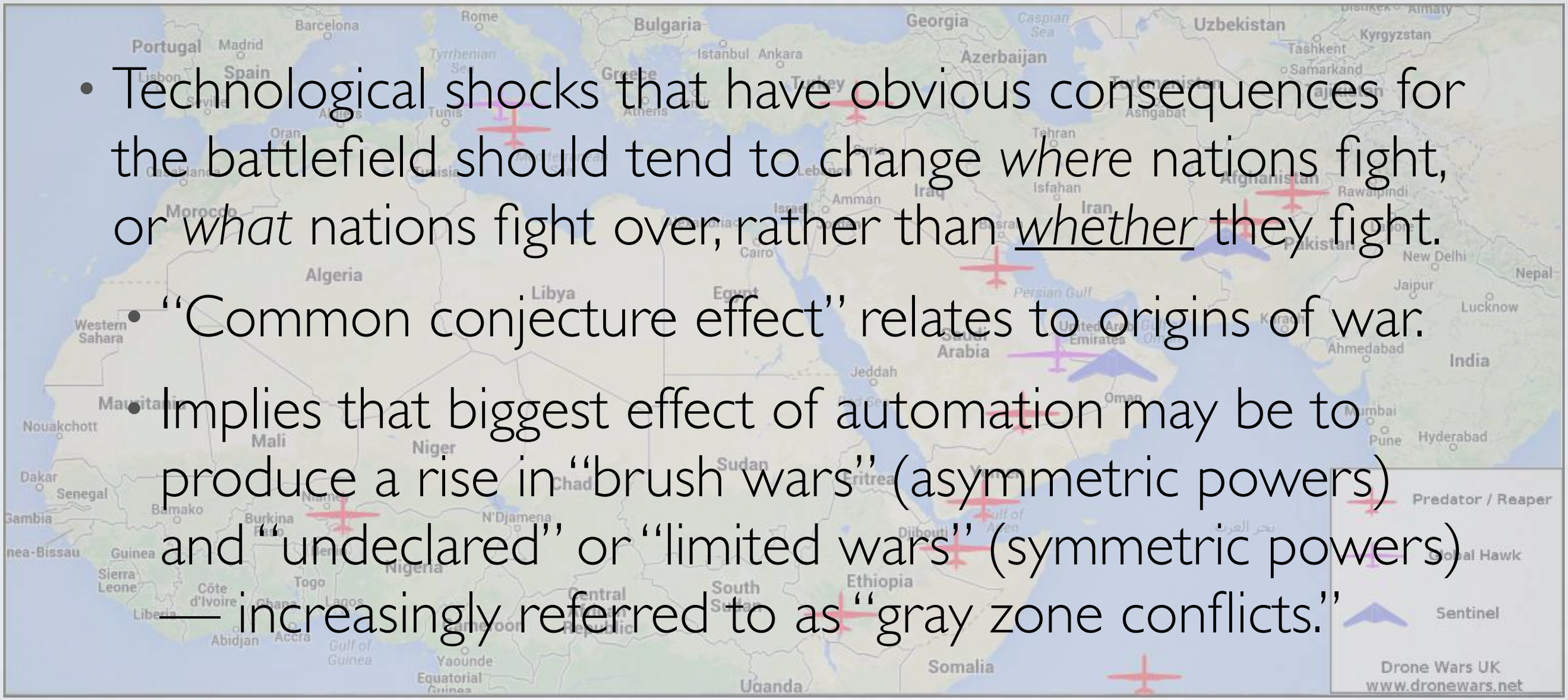
- Substitution of capital for labor is imperfect
  - Can't get all humans off battlefield - need cognition
  - Attempts to minimize human exposure to harm just emphasize the societal value of human beings.
    - Increased appeal of targeting human combatants (Mogadishu, enemy "firing at the ramparts")
    - Logical extreme "little wars" (ubiquitous, unstable).

MILITARY AUTOMATION

- What happens when capital finally begins to substitute for brain power, rather than just brawn, on the battlefield?
- Military automation allows humans on one or both sides to work remotely, or to not be involved at all.
- Would appear to benefit technological power (it does).
  - However, there are also non-intuitive consequences
    - Simple version: new "target set" for conflicts

THE FREQUENCY OF WARFARE

- Technological shocks that have obvious consequences for the battlefield should tend to change *where* nations fight, or *what* nations fight over, rather than <u>*whether*</u> they fight.
  - "Common conjecture effect" relates to origins of war.
  - Implies that biggest effect of automation may be to produce a rise in "brush wars" (asymmetric powers) and "undeclared" or "limited wars" (symmetric powers) — increasingly referred to as "gray zone conflicts."



CASUALTIES

- Myth that automation will make war "costless"
  - Costless war does not serve the purposes of war
    - Harm (prospective and retrospective): punishment vs. denial strategies in offense/defense and deterrence.
  - Tendency will be to attempt to re-assert human cost
    - Asymmetric war: Terrorism and other off-battlefield aggression, initiated by less technological actor.
    - Symmetric war: Targeting enemy "non-combatants."

SCENARIOS: ONE-SIDED

- Lower (human) cost of war leads to increased aggression
  - Some of the effect absorbed by acquiescence of target
  - Some of effect countered by increased aggression
    - Technological power unchallenged where it is resolved
    - Tendency toward intervention against marginal targets
    - Reduced exposure to casualties balanced by reduced willingness to absorb large numbers of casualties
- Net effect uncertain: increased uncertainty increases instability and probability that challenges lead to warfare

SCENARIOS: ONE-SIDED II

- Lower exposure + greater sensitivity creates asymmetry:
  - Technological initiator must anticipate low battlefield casualties in order to be willing to intervene.
  - Less technological target must seek to maximize opponent's battlefield casualties in order to prevail.
- Net effect depends on:
  - Willingness of target to resist, imposing casualties
  - Ability of initiator to protect its forces from harm
  - Resolve of initiator to persist despite casualties

SCENARIOS: ONE-SIDED III

- One-sided automation of war changes this dynamic
  - Technological initiator *knows* battlefield casualties will be low or possibly even non-existent.
  - Less technological target cannot maximize battlefield casualties, and therefore cannot win on the battlefield.
    - Less technological power must concede at the outset
    - Or find another "battlefield" on which to prevail.
    - Obvious solution is to target enemy non-combatants.

SCENARIOS: TWO-SIDED

- Analogue applies when both sides field automated armies.
  - "Winner" of robot wars can declare victory, but still depends on "loser" accepting defeat, making concessions
  - "Limited automated symmetric war" is a dispute among robots. Winner is side with the most successful robots.
  - "Unlimited automated symmetric war" involves killing civilians. Winner is side that convinces opponent to quit.
    - May be side with best robots, but punishment is an inherently contingent strategy -- the loser decides.

SCENARIOS: TWO-SIDED II

- Additional implications:
  - Appeal of denial strategies in warfare and low cost of automated occupation could see the re-emergence of territorial aggression, possible new age of imperialism.
  - Paradoxical need to target civilians to win automated wars suggests evolution in norms about military force.
    - The side that only strikes combatants will lose -- can make an analogy to strategic bombing during WWII.

- Military automation makes occupation attractive:
  - Implication: second colonialist era
  - Military automation makes it cheap for technological/capital-intensive actors to occupy territory, suppress populations
    - Model: state can "make," "buy" or "take."
      - Prefers to take when appropriation cheap
      - Foreign territories w/ less sophisticated militaries are ripe for plunder

COLONIALISM II

- What states/territories are targets:
- Less often about "stuff" than about "strategy"
  - Governments/actors that do not comply can be toppled and their territories occupied
    - Iraq (but with more patience, since cheap)
    - Saudi Arabia (obstreperous gov. we need)
    - Some places may in fact be cheap enough to govern that we "take" rather than "trade"

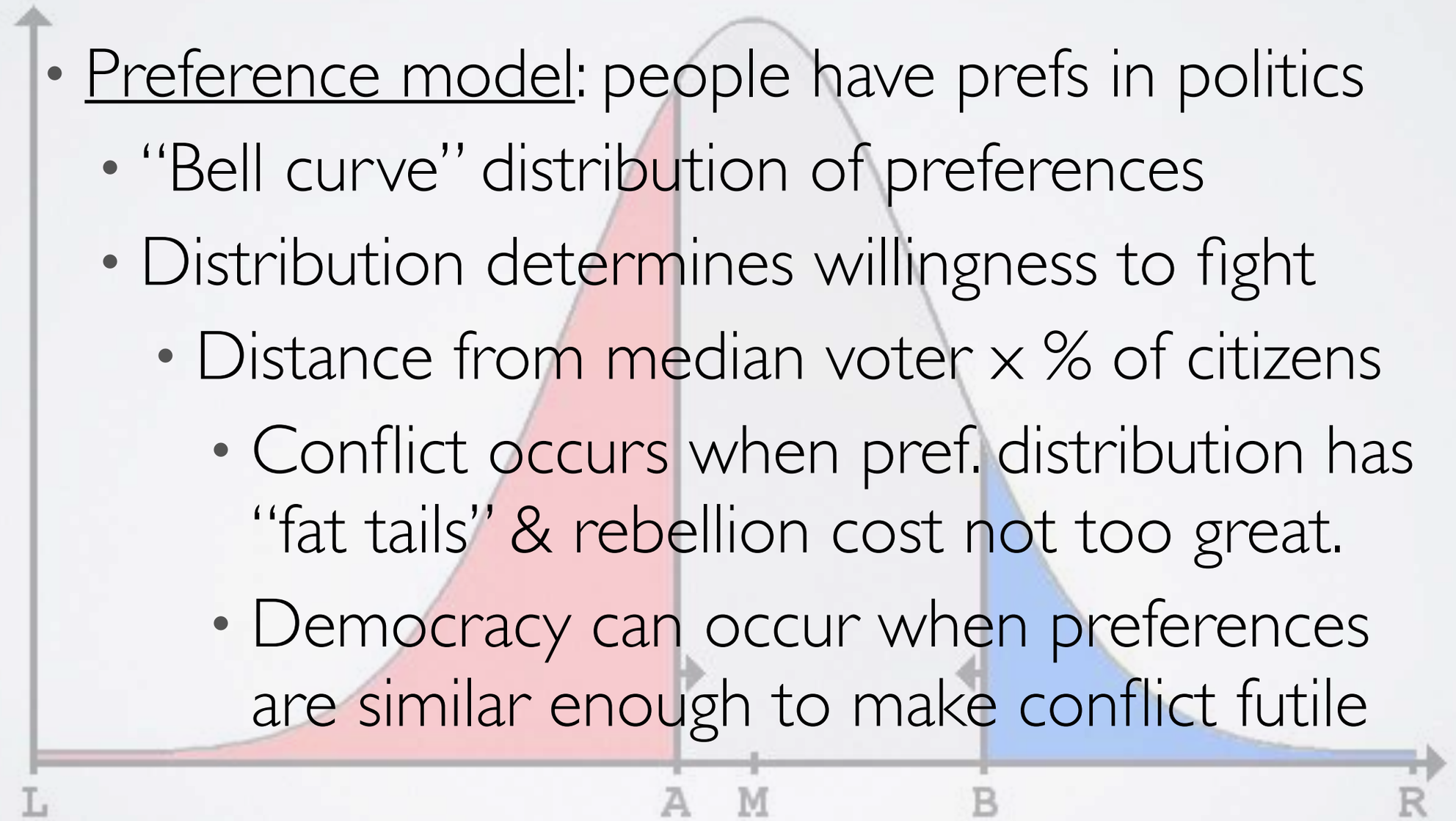
DOMESTIC POLITICS

If governments can coerce/govern abroad…

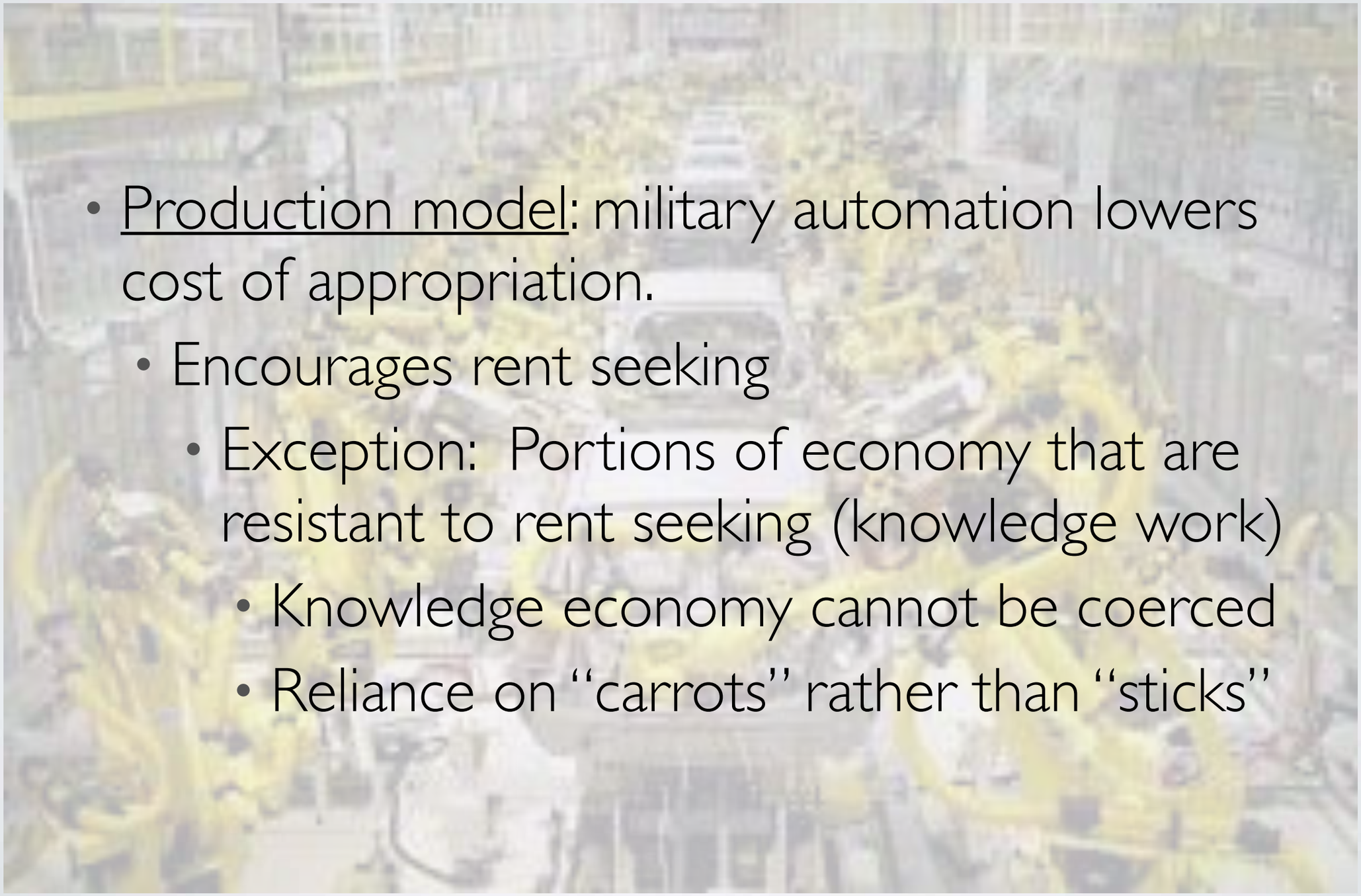
- Two basic models of domestic political processes:
  - Production model: State is basically an economy
    - Gov rent seeks:
      - Share with "winning coalition"
      - Repress dissent from the rest
        - Democracy:
          - Gov won't repress if costlier than rents.
            - Gov won't repress when rents are hard

DOMESTIC POLITICS II

- Preference model: people have prefs in politics
  - "Bell curve" distribution of preferences
- Distribution determines willingness to fight
  - Distance from median voter x % of citizens
    - Conflict occurs when pref. distribution has "fat tails" & rebellion cost not too great.
    - Democracy can occur when preferences are similar enough to make conflict futile



ROBOTS AT HOME



- Production model: military automation lowers cost of appropriation.
  - Encourages rent seeking
    - Exception: Portions of economy that are resistant to rent seeking (knowledge work)
      - Knowledge economy cannot be coerced
      - Reliance on "carrots" rather than "sticks"

ROBOTS AT HOME II

- Preference model: automation lowers cost of repression — tends to weaken democracy.
  - Also displaces workforce, reducing perception or need for equality in workforce/population

CONCLUSION

- Secular trend in modern times toward capital accumulation and costlier labor
  - Tends to make appropriation more expensive.
  - Fruits of appropriation less valuable
    - Encourages both democracy & decolonization
      - If preference heterogeneity is not large.
- Mil. automation reverses most of these trends
  - Where appropriation is possible:
    - Declining costs for repression/appropriation will lead to an increase in these activities.