

Can We Still Regulate Emerging Technologies?

Dr. Ulrich Kühn | May 9, 2019

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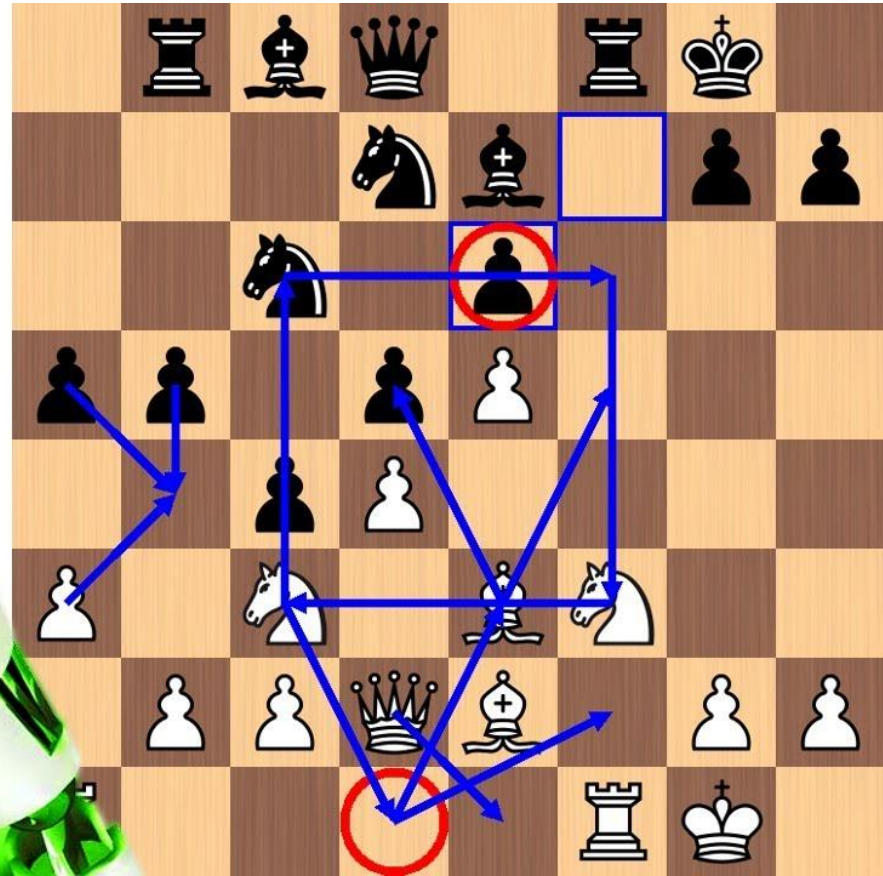
“Emerging Technologies: A Blessing or a Curse?”

United Nations, Vienna

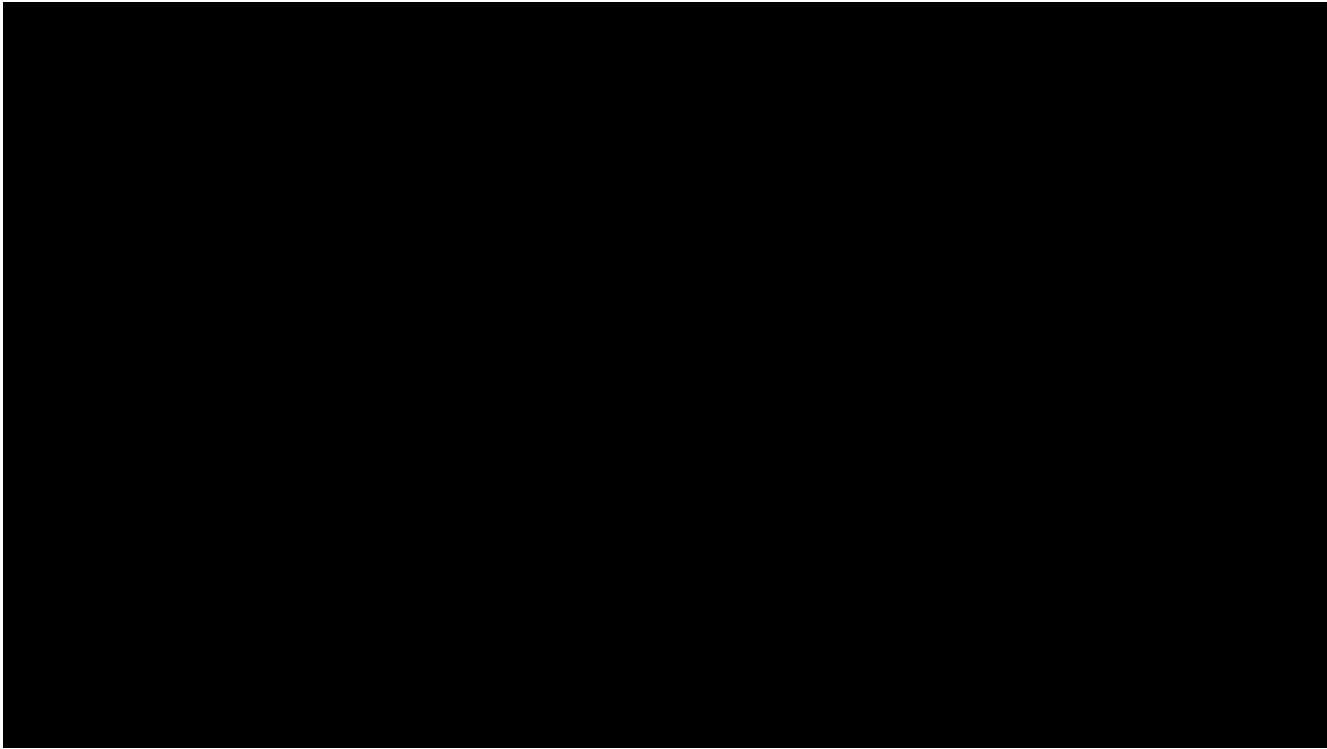
1997 Deep Blue vs. Garry Kasparov



2019 AlphaZero vs. Stockfish 8



2018 BostonDynamics Atlas



Regulating Emerging Tech: A Look Back

- Technologies are always “emerging” and efforts to regulate technology are anything but new.
- Regulating emerging technologies and corresponding weapons systems has usually three general purposes:
 - (1) to limit or prevent unnecessary or extensive human suffering;
 - (2) to prevent certain actors from gaining access to certain technologies;
 - (3) to prevent all-out (nuclear) war.
- Emergence of WMD and humanitarian law leads to “regulation norm” in the 20th century in the form of export control, nonproliferation, arms control and disarmament agreements (e.g., NPT, CWC, BWC, MTCR, CCW, PTBT, CTBT, FMCT, SALT, START, CFE, PSI, IAEA, NSG, ABM, INF, CoCom ... and so forth)

3 Misleading Assumptions about Emerging Tech

- First: today's Emerging Technologies are so different – they emerge more rapidly and international regulatory policies cannot keep pace
- Counterargument exhibit one: missile technology develops in the 1930/1940s > regulation of missile technology emerges in late 1980s
- Counterargument exhibit two: nuclear weapons technology develops in the 1930/1940s > regulation emerges only after Cuban Missile Crisis
- Counterargument exhibit three: current UN efforts under Convention on CCW to regulate LAWS before they are broadly employed
- Counterargument exhibit four: efforts by NSG to proactively address potential proliferation impacts of Additive Manufacturing
- The real challenge is a general trend of dismissing multilateral cooperative instruments and relying on unilateralism instead.

3 Misleading Assumptions about Emerging Tech

- Second: today's Emerging Technologies are challenging existing arms control and disarmament agreements – they contribute to the collapse of decades-old treaties
- Counterargument exhibit one: most arms control agreements have technical working groups to address exactly those challenges
- Counterargument exhibit two: technical working groups or review cycles have contributed to keeping agreements up to date ... so far
- The real challenge is a waning interest in military restraint and common solutions writ large.

3 Misleading Assumptions about Emerging Tech

- Third: today's Emerging Technologies can still be dealt with by using the same strategic concepts and terminologies we use since decades
- Counterargument exhibit one: cyber operations can hardly be used for “signaling” or “assurance” missions without at least causing massive potential for “inadvertent escalation”
- Counterargument exhibit two: classical laws of “escalation” and “escalation management” do not work in cyber environment or on future battlefields predominantly inhabited by LAWS
- The real challenge is to adapt our knowledge where it is necessary and to keep those strategic concepts that are still sufficient.

Conclusions

- Regulating Emerging Technologies is still possible and we should not give in to hysteria ... BUT
 1. The turn away by a number of countries from multilateralism to unilateralism does not bode well for tackling Emerging Technologies.
 2. The erosion of instruments of regulation – not because of Emerging Technologies but in addition to their growing availability – weakens the international community’s “tool kit.”
 3. We will have to come up with novel and certainly more creative thinking as regards strategic use and regulation of some Emerging Technologies.

Thank you for your attention!

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