

**Evaluation of the value of a Scientific Organisation
for the Development of Frontier AI that **excludes the
US and China****

Current Proposals for a CERN for AI

Non-cooperation over AI is due to its dual uses: providing both economic and military advantage. An edge in AI has the potential to advance all military aspects: improving intelligence gathering, decision making, and the use of autonomous weapons.

Robert Trager has also shown that the unpredictability of advances increases the potential for a military arms race. US policymakers are determined to maintain their lead in AI, creating reluctance to engage in cooperative efforts which include China.

Whilst China might consider cooperating, it might exert pressure on academics and private citizens to withhold critical AI advancements from an international scientific institute.

Current proposals by academics for governments to “do the unprecedented” by demanding that military rivals share their relative technological advantage is naïve and dangerous.

Alternative Propositions

1. The European Union (EU) must emerge as a counterweight to both dominant AI companies and the hegemony of China and the US
2. . A scientific institute which includes current AI frontrunners cannot be formed due to the collective action problem of prioritising individual advantages over collective benefits, in both military and commercial contexts.^[1]
3. Instead, the solution lies in fostering cooperation among countries that stand to gain more collectively than individually.^[2] The EU, despite its size and economic development, lags in AI innovation ^[3]

IR Theories

- *Realist* : IR is underlined by anarchy, this means there is no “world order” dictating states behaviour, instead great powers call the shots
- *Constructivist*: International norms and institutions can dictate the behaviors of nation states

Most modern Realist scholars take on Constructivist approaches in so far as norms and institutions control behaviors only in as far as it is beneficial to any state.

Key Considerations Needed

- Would this increase the likelihood of great power conflict?
 - a. Increase likelihood of Chinese dangerous developments in AI because they feel threatened by growing European power.
 - b. Realist Theory of IR: Multipolar Systems are by their nature destabilising
 - c. Robert Trager – information sharing, if shared information shows close levels of development it increases likelihood of conflict, otherwise it decreases likelihood of
 - d. Provides the US and China with increasing information for which to develop, an imbalance in European Transparency, with high barriers to information sharing from the other side.

Key Considerations Needed

- Or decrease it:
 - a. EU acts as a multilateral power, rather than a “great power” (EU Multilateralism in a multipolar world) – third argument. This is as a multilateral institution that the EU acts fundamentally multilaterally in everything it does, which is more of a constructivist view of IR (the idea that international institutions and norms can determine behaviours of individual nation states). This means that even if the EU did develop a military edge, they would not use this increase international tensions, and likelihood of Great Power Conflict.
 - b. Improved information sharing undermines the military “lead” of the US or China, as this only comes from a military capability that the other power does not have – relative power is more important than power.
 - c. An EU lead might be the only way to get the other powers to “stand down” from increased brinksmanship, and by providing a counterweight to current Sino-US ambitions diffuse tensions
 - d. Eventually, like CERN, the clear advances of this institution in comparison to others could promote transparency and push information sharing between China and the US

Implementation Problems

- **Funding:**

- In the new budget for 2021–7, the EU will invest 2.2 billion euro in AI – to be complemented by funds coming from the 95 billion-euro Horizon Europe programme, of which about 20 per cent will go into R&D of the digital agenda.
- Whereas for China the objective set for 2020 was for the country’s core AI industries to exceed 23 billion US dollars and related industries 150 billion. By 2025, China’s core AI industries are to exceed 60 billion US dollars in value; its related industries, 760 billion – by 2030, they are expected to exceed, respectively, 150 billion and 1.5 trillion US dollars.

- **Talent:**

- Eighteen per cent of the world’s top researchers in the field of AI come from Europe, a proportion that increases to 22 per cent if the UK is included, but only 10 per cent of them – 14 per cent in the case of the
- UK – work in Europe.