Chapter 17. An MVP positioning of USA and China on a paradox abacus and periodic table of nations

Introduction

Artificial intelligence is moving faster than the institutions around it. Each increase in capability creates benefits, risks and choices that do not sit neatly on one side of an argument. More capability can bring more value and more danger. More openness can spread innovation and misuse. More autonomy can increase productivity and reduce human control. Faster development can create learning and reduce the time available for challenge.

These are not problems with one correct answer. They are paradoxes: competing goods that have to be held together and repeatedly resettled as circumstances change. AI makes that task harder because the technology keeps moving. A settlement that looks reasonable today may be inadequate after the next large increase in capability.

The difficulty is made worse by the way the debate is usually seen. Public discussion compresses the problem into slogans: win or lose, lead or fall behind, regulate or innovate, open or close, compete or cooperate. Those frames are understandable, but they hide the structure underneath. If the underlying tensions remain hidden, the chance of finding better settlements is reduced.

This chapter therefore has a simple purpose: make the paradox problem visible. It uses a ten-row Paradox Abacus to show, at a manageable level of detail, the main tensions created by frontier AI. It then applies the same instrument separately to the United States and China. The aim is not to declare a winner. It is to see where each country is being pulled, where their settlements differ, where they face the same difficulty, and where the problem has moved beyond what either nation can settle alone.

The hope is the same one that runs through this book: better visibility does not guarantee a better solution, but poor visibility makes a better solution much less likely. Granulated visibility creates something that slogans do not: a shared object that can be examined, challenged and moved.

How This Chapter Unfolds

1. **Why visibility matters -** Explains why compressed arguments and winner-loser thinking hide the structure of the AI problem.

2. **The paradox net keeps moving -** Shows why settlements must change as AI capability, reach and consequence change.
3. **Ten core paradoxes -** Reduces the field to a human-scale set of recurring tensions that can be held in view together.
4. **The five-position Abacus** - Creates a simple common instrument for showing strong left- or right-hand settlements, pole-led settlements and held tension.
5. **The United States -** Applies the ten paradoxes to the current US setting and makes the main pressures visible.
6. **China -** Applies the same paradoxes to China using the same instrument and level of detail.
7. **Seeing the two together -** Shows where the countries differ, where they are pulled in the same direction and where both remain exposed.
8. **Which problems sit above the nation -** Identifies the paradoxes that cannot be adequately settled by either country acting alone.
9. **What this means for humans -** Shows how visibility tools at the personal, group, national and transnational levels can help improve settlement.
10. **What this means for the USA-China relationship -** Shows why rivalry and cooperation must themselves be held as a paradox and why transnational visibility matters.
11. **What this means for AI -** Explains why AI should help expose paradoxes and support visibility tools rather than silently optimise them away.

1. Why visibility matters

The first difficulty is not lack of intelligence. It is lack of visibility. The AI debate contains many legitimate goods, but they are often bundled into political, commercial or national positions. Once that happens, people defend the bundle rather than examine the tensions inside it.

The Abacus is useful because it decomposes the argument. Instead of asking whether the United States or China is right, it asks where each sits on the same set of competing goods. Instead of saying that one side favours innovation and the other control, it asks how capability is being balanced with restraint, how competition is being balanced with cooperation, and how national advantage is being balanced with global responsibility.

This is the reason for doing the analysis at some granularity. Visibility makes disagreement more precise. It can show that two sides agree on the existence of a tension but place the settlement differently. It can show that both are being pulled

toward the same strongly one-sided settlement. It can also show that a dispute that appears national is actually being driven by a shared international problem.

The purpose is therefore not measurement for its own sake. It is to improve the conditions for thought and, later, for settlement.

2. The paradox net keeps moving

AI does not create one fixed set of tensions with one lasting answer. The paradox net moves as capability moves. A decision that can be safely made inside a company at one stage may require government authority at the next. A risk that can be contained inside one country may become international when models, agents, cyber capability, biological capability or infrastructure effects cross borders.

The consequence is important. The settlement cannot be fixed once and then defended. It has to be observed and moved as the technology changes. Capability / safety, openness / control, autonomy / human control and present advantage / future stewardship all change their practical meaning as systems become more capable and more consequential.

This is also why the USA-China relationship sits inside the paradox problem rather than outside it. Each country is trying to preserve legitimate national advantage while facing risks that may not respect national boundaries. The better the technology becomes, the harder it is to pretend that the two objectives can be separated.

3. Ten core paradoxes

1. Capability / Innovation ↔ Safety / Restraint - Progress creates value; restraint protects against harm. Either can fail if it overwhelms the other.

2. Speed ↔ Deliberation - Speed creates learning and advantage; deliberation creates challenge, legitimacy and time to see consequences.

3. Competition ↔ Cooperation - Competition drives effort and diversity; cooperation is required for shared risks and common rules.

4. Openness / Access ↔ Security / Control - Access spreads capability and innovation; control limits misuse and dangerous diffusion.

5. Secrecy ↔ Transparency - Secrecy protects security and legitimate advantage; transparency enables trust, scrutiny and correction.

6. Autonomy ↔ Human Control - Autonomy creates usefulness and scale; human control preserves agency, interruption and responsibility.

7. Present Advantage ↔ Future Stewardship - Present gains matter; future stewardship preserves viability and gives weight to consequences that may arrive years later and may be difficult to reverse.

8. National Advantage ↔ Global Responsibility - National interest is legitimate; some AI consequences cross borders and require shared restraint.

9. Private Initiative ↔ Public Legitimacy - Private actors can move quickly; public authority is needed when decisions bind people beyond the firm.

10. Concentrated Control ↔ Distributed Challenge - Clear authority enables action; independent challenge reduces error, capture and overreach.

Ten is not a claim that no other paradox exists. It is a practical limit. The purpose is to keep the whole field visible enough for a human reader to hold it in mind and compare it across the two countries.

4. The five-position Abacus

The Abacus uses five positions. The centre is not automatically correct and neither side is automatically good or bad. The outer positions show a strong settlement toward one of the two goods. The inner positions show a settlement led by one good while still preserving the competing good. The centre shows a tension being actively held.

Ten paradox AI Abacus. Exhibit 17.1

Left Paradox descriptor	Strongly left -2	Left-led -1	Held 0	Right-led +1	Strongly right +2	Right Paradox descriptor
Capability / Innovation	Capability and innovation strongly lead; restraint is limited	Capability leads; meaningful safety and restraint remain	Capability and safety are actively held	Safety and restraint lead; innovation remains important	Safety and restraint strongly lead; capability growth is tightly bounded	Safety / Restraint
Speed	Speed strongly leads; review time is compressed	Speed leads; deliberation remains part of the process	Speed and deliberation are actively held	Deliberation leads; timely action remains possible	Deliberation strongly leads; speed is secondary	Deliberation
Competition	Competition strongly leads; cooperation is limited	Competition leads; cooperation remains	Competition and cooperation are actively held	Cooperation leads; competition remains useful	Cooperation strongly leads; competitive rivalry is limited	Cooperation
Openness / Access	Openness and access strongly lead; controls are limited	Access leads; meaningful security controls remain	Access and security are actively held	Security and control lead; meaningful access remains	Security and control strongly lead; access is tightly bounded	Security / Control
Secrecy	Secrecy strongly leads; visibility is limited	Secrecy leads; meaningful transparency remains	Secrecy and transparency are actively held	Transparency leads; legitimate secrecy remains	Transparency strongly leads; secrecy is tightly limited	Transparency
Autonomy	Autonomy strongly leads; human intervention is limited	Autonomy leads; meaningful human control remains	Autonomy and human control are actively held	Human control leads; useful autonomy remains	Human control strongly leads; autonomy is tightly bounded	Human Control
Present Advantage	Present advantage strongly leads; future effects carry less weight	Present advantage leads; future stewardship remains	Present and future are actively held	Future stewardship leads; present advantage remains important	Future stewardship strongly leads; present advantage is secondary	Future Stewardship
National Advantage	National advantage strongly leads; global obligations are limited	National advantage leads; global responsibility remains	National and global responsibilities are actively held	Global responsibility leads; national interest remains legitimate	Global responsibility strongly leads; national advantage is secondary	Global Responsibility
Private Initiative	Private initiative strongly leads; public authority is limited	Private initiative leads; public legitimacy remains	Private initiative and public legitimacy are actively held	Public legitimacy leads; private initiative remains important	Public authority strongly leads; private discretion is tightly bounded	Public Legitimacy
Concentrated Control	Concentrated control strongly leads; independent challenge is limited	Concentrated control leads; meaningful challenge remains	Control and challenge are actively held	Distributed challenge leads; clear authority remains	Distributed challenge strongly leads; central control is tightly bounded	Distributed Challenge

5. The United States

The US setting is shaped by privately led frontier development, large capital markets, intense competition between laboratories, strong national-security interest and a public-control system that is still being assembled around a fast-moving technology. The broad pull is toward capability, speed and competition, with safety, review and public authority acting as important but often slower counterweights.

USA AI Paradox Reading. Exhibit 17.2

Left-hand good	-2	-1	0	+1	+2	Right-hand good
Capability / Innovation		●				Safety / Restraint
Speed		●				Deliberation
Competition		●				Cooperation
Openness / Access			●			Security / Control
Secrecy		●				Transparency
Autonomy		●				Human Control
Present Advantage		●				Future Stewardship
National Advantage		●				Global Responsibility
Private Initiative		●				Public Legitimacy
Concentrated Control		●				Distributed Challenge

● **USA**

The important point is not whether a US placement sits on the left or the right. It is that several rows are being pulled in the same direction at once. Capability, speed, competition, autonomy, present advantage and national advantage reinforce one another. That combined pull matters more than any single dot.

The US reading is an overall reading of the US frontier-AI system, informed by the direction and scale of its leading laboratories, the competitive environment around them, national-security pressure and the public-control architecture around the sector. A lab-by-lab Abacus would show a spread around many of the US placements. That spread matters because the national pattern is partly the result of

different laboratory philosophies competing inside the same US system, rather than one settled American position.

6. China

China faces the same underlying technology but through a different institutional architecture. Frontier development is commercially competitive and strategically important, while the state has stronger direct authority over deployment, content, platforms and national priorities. This shifts some settlements toward control and public authority, but it does not remove the pressures created by capability growth or national competition.

China AI Paradox Reading. Exhibit 17.3

Left-hand good	-2	-1	0	+1	+2	Right-hand good
Capability / Innovation		●				Safety / Restraint
Speed		●				Deliberation
Competition			●			Cooperation
Openness / Access				●		Security / Control
Secrecy		●				Transparency
Autonomy			●			Human Control
Present Advantage			●			Future Stewardship
National Advantage		●				Global Responsibility
Private Initiative				●		Public Legitimacy
Concentrated Control		●				Distributed Challenge

● **China**

Again, the important point is the pattern. China reaches some settlements through stronger public control, but it remains capability-led and nationally strategic. The architecture changes the shape of the paradox. It does not make the paradox disappear.

7. Seeing the Two Together

Putting the two readings beside each other changes the discussion. The most important finding is not difference but shared pressure. Both countries are capability-led, speed-led, secrecy-leaning and nationally strategic. Their institutional systems differ, but the technology pushes several paradoxes in the same direction.

The differences are also useful. China uses stronger public and administrative control. The United States gives greater room to private initiative, market competition and distributed challenge. Those differences matter because they change where each country is likely to see risk, legitimacy and acceptable restraint.

The visibility created by the Abacus makes a third category possible: shared exposure. On Competition / Cooperation and National Advantage / Global Responsibility, both countries face the same structural difficulty. Each can reasonably fear that restraint will create advantage for the other. Each can also be harmed if both continue to act as though the global consequences belong to somebody else.

USA-China AI Abacus. Exhibit 17.4

Left-hand good	-2	-1	0	+1	+2	Right-hand good
Capability / Innovation		● ●				Safety / Restraint
Speed		● ●				Deliberation
Competition		●	●			Cooperation
Openness / Access			●	●		Security / Control
Secrecy		● ●				Transparency
Autonomy		●	●			Human Control
Present Advantage		●	●			Future Stewardship
National Advantage		● ●				Global Responsibility
Private Initiative		●		●		Public Legitimacy
Concentrated Control		● ●				Distributed Challenge

● **USA** ● **China**

This is the point of granulation. The Abacus does not dissolve disagreement. It shows exactly where the disagreement sits, where the two countries are more alike than their rhetoric suggests, and where the same pressure is pushing both toward the same strongly one-sided settlement.

8. Which problems sit above the nation

Some paradoxes can still be settled largely inside firms or national systems. Others cannot. As AI capability becomes more consequential, cyber effects, biological risks,

model diffusion, infrastructure dependence, strategic deception and loss-of-control risks can cross borders quickly. A national settlement may then be necessary but no longer sufficient.

The most important rows are Competition / Cooperation and National Advantage / Global Responsibility. The United States and China can each improve their own domestic settlements, but neither can create a stable global settlement alone. If one country treats every restraint as unilateral disadvantage, the other has a strong incentive to do the same. The result can be a race in which both understand the risk and neither believes it can safely move first.

That is the high-level Abacus problem. It is not solved by asking either country to stop competing. It is solved by finding areas where competition can remain legitimate while shared risks are placed inside reciprocal constraints, common visibility and agreed processes for correction.

This chapter stops at that point. The next chapter turns to safety. Its starting question is different: once the paradox problem is visible, what level of safety and control is actually required? The important warning is already visible here: a problem that has moved above the nation cannot be made safe by national arrangements alone.

9. What this means for humans

Humans are good at turning complicated tensions into simple positions. That helps us act quickly, but it is dangerous when both sides of a tension contain something we need. AI increases the cost of that habit because the technology changes faster than many of our institutions and because the consequences can move across levels very quickly.

The human task is therefore to make the competing goods visible before choosing. We need to see what is being gained, what is being lost, who has authority to make the settlement and how the answer may need to move as capability changes. The Abacus is one way of slowing the argument down enough to see its structure.

This also connects directly to the pilots. The visibility tools we are developing at the personal, group, national and transnational levels should be used to help improve settlement. Personal and group visibility tools can help people and teams see how they are being pulled before conflict hardens. National visibility tools can help societies surface their own tensions. Transnational visibility tools can help countries see where the paradox has moved above the nation and where cooperation is becoming necessary.

10. What this means for the USA-China relationship

The USA-China AI relationship cannot be reduced to either competition or cooperation. It is itself a paradox. Both countries have legitimate reasons to compete. Both also face risks that may become impossible to contain nationally.

The practical requirement is therefore not trust in the abstract. It is visibility and reciprocity around particular paradoxes. Where the two countries can see the same shared risk, they have a basis for testing limited settlements: common definitions, reciprocal disclosure, shared thresholds, incident communication, agreed constraints or joint review. The settlement can be narrow and still matter.

This is exactly where the later pilot work belongs. The national visibility tools and transnational visibility tools should be used here. Their job is not to manufacture harmony. Their job is to make the paradoxes visible enough that the two sides can identify shared failure risks, test limited settlements and move, where possible, toward better solutions.

That suggests a later pilot for this book: a USA-China Cooperative Paradox Pilot. Its first purpose would not be to negotiate a grand bargain. It would be to test whether both sides can use the same ten-row Abacus, compare their own and each other's placements, identify shared failure risks and locate the small number of paradoxes where cooperation is necessary because neither side can succeed alone.

11. What this means for AI

AI will increasingly encounter questions that look like optimisation problems but are actually paradoxes. More helpfulness may require more restraint. More autonomy may require stronger human control. More efficiency may create social costs. More national capability may create global risk.

A capable AI should help make those tensions visible. It should be able to show the competing goods, the current settlement, the likely consequences of movement in either direction and the uncertainty around them. It should help humans compare options and see where authority belongs.

It should also help operate the visibility tools being developed in the pilots. At the personal, group, national and transnational levels, AI can help surface the tension, organise the evidence, show possible settlements and make the consequences easier to see. In that role, AI becomes a support for visibility rather than a substitute for human judgement.

The same point applies when we talk about AI laboratories as though they were one actor. They are not. Different laboratories will place the same paradox differently because they are built around different aims, philosophies, governance

arrangements and commercial strategies. The visibility tools should therefore be capable of operating at both levels: showing the broad national pattern while also making the differences between individual laboratories visible where those differences materially affect the settlement.

AI should not quietly turn contested human settlements into a single technical objective. The role of AI should be to improve visibility, evidence and foresight. Legitimate settlement must remain with humans and the institutions responsible for the consequences.