



QUANTUM LEAP

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BY AUG. 29, 1940, FRANCE HAD fallen to Nazi rule. German bombs were falling on London. And Edward George Bowen was on a mission to get out of the city.

Bowen was headed to Euston Station and then Liverpool. From there, he would deliver across the Atlantic Ocean a locked metal deedbox containing a top-secret cavity magnetron. The device was a critical component for a critical new instrument of war: microwave radar.

En route to the train station, the driver he hailed refused to carry the box inside the cab, so the delicate device was strapped to the taxi roof. At the station, an overeager porter ran off with the precious hardware; Bowen later found the black box sitting on the train luggage rack, waiting for him.

But the greatest act of trust was yet to come. Bowen and the other members of the Tizard Mission would present and leave behind the cavity magnetron, as well as blueprints for the UK's most important technological secrets, to their American and Canadian cousins with a no-strings-attached plea: Develop and mass-produce these advanced British military inventions.

The U.S. and Canada would accept the partnership and UK designs for early turbojets, proximity fuses, sonar systems and self-sealing fuel tanks, as well as research on nuclear fission. Microwave radar was particularly potent. Compact enough to fit on submarines, ships and aircraft, the technology was useful for hunting U-boats from the air and helped win the Battle of the Atlantic. Shortly after the war, historian James Phinney Baxter III hailed the cavity magnetron as "the most valuable cargo ever brought to our shores."

The Tizard Mission—named for its leader, Henry Tizard, chairman of the UK's Aeronautical Research Committee—laid the technological foundation for the Allied victory. It should serve as a reminder of the power of alliances.

Today, the U.S. is moving away from its friends, even as it faces the technological, economic and military behemoth that is China. Future historians will likely not view the Trump administration's trade war against the entire world, all at once—including against decades-old allies—as a grand strategy by a "very stable genius."

Liberal democracies should be linking arms against China. They should recognize that supply chains—not trade deficits—matter. And allied nations should say the quiet part aloud: We should shrink trade with countries that are pointing nuclear weapons at us.

Defense treaty partners should upgrade their relationships to an economic security pact that lowers trade barriers for friends and places uniform tariffs and security restrictions on strategic components produced by adversaries. To reforge the arsenals of democracy, tariff-generated funds should be spent building up an allied supply chain via loans for industry, scholarships for university students and salaries for scientists.

A trade security alliance among NATO nations, Australia, Japan, New Zealand and South Korea would create a new supersize military industrial base that could overmatch the scale of Chinese production. There are inklings of such a pact in the AUKUS agreement, but that partnership is too focused on difficult-to-produce nuclear submarines and hypersonic missiles.

Scale—matching industrial capacity with good ideas, as was done in World War II—is the chief benefit of a multinational trade security alliance. As such, members should look widely to "ally-shore" mass-produced civilian components with dual uses, such as semiconductors, batteries, electric motors, sensors and radios, that are lethal when used to make a loitering munition, for instance.

To keep an edge, cross-border collaboration among researchers and engineers developing emerging technologies should be encouraged, such as in space, quantum computing, nuclear fusion, advanced manufacturing, high-energy lasers and artificial intelligence.

This would be, of course, an act of trust. Such an accord would be a bet that a common security requires a common economy. It would require the current U.S. leadership to see trade among friends as a force multiplier, not a zero-sum transaction.

Washington needs to set aside its trade war with allies and go the extra mile to make amends. If it stubbornly refuses, the U.S. will relearn the hard way the Churchillian maxim: "There is only one thing worse than fighting with allies, and that is fighting without them." 🇺🇸

'Ally-Shoring'

A trade security alliance would strengthen the U.S.



Microwave radar enabled the Royal Air Force Bristol Beaufighter Mk. VI to intercept inbound German bombers at night.

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