Essential Question: 4 February 2021

How did supersonic airline transport come to be, and why did it fail?

Questions/Key Points	Notes

What drew people to Concorde, other than the fact that it traveled fast?	• Concorde
	  ○ https://www.jstor.org/stable/43213404
	  ○ https://www.jstor.org/stable/25148200
	  ○ https://www.britannica.com/technology/Concorde
	  ○ Supersonic airliner
	  ○ Was a project b/w French and Britain
	  ○ (It's not the Concorde, it's just Concorde)
	  ○ British and French engineers hated each other even though they were collaborating
	  ○ Went through 3 complete redesigns
	  ○ Became quite iconic; people were drawn to an aircraft that could fly faster than the speed of sound, and had such a unique design relative to other aircraft.
	  ○ First transatlantic flight: September 26, 1973
	  ○ First scheduled flight was from London to Bahrain
	  ○ Cruises at 60,000 ft and Mach 2+. You could see the curvature of the earth from that altitude.

What motivations did the USSR have to build such an aircraft? Did they see the critical design flaws earlier?	• Tupolev 144
	  ○ https://www.jstor.org/stable/26272772
	  ○ Was loud and less comfortable than Concorde
	  ○ Another manifestation of Cold War tech rivalry
	  ○ First flight was two months earlier than Concorde
	  ○ Had these retractable canard wings which looked pretty cool
	  ○ Was doomed from the start; had many engine problems
	  ○ You couldn't turn off the afterburners (unlike Concorde) which made it such a gas guzzler
	  ○ Wouldn't have been able to fly long distances as a result

	• Politics of supersonic airliners
	  ○ American aircraft were very ubiquitous in the airline industry at the time; other nations wanted to prove their superiority or independence on American industry
	  ○ Some people were very upset about the noise from Concorde, as well as its environmental impact
	  ○ How far are countries willing to go to try and prove themselves? At what cost?

While accidents contributed to the failure of SSTs, the ultimate reason was because of economics.	• Why did they fail?
	  ○ Concorde - because of economics; the fuel cost for a transatlantic flight was the same as a 747 but the number of passengers was significantly less. Concorde also required a lot of maintenance.
	  ○ Only solution was to greatly increase ticket prices, which worked for a while but
	  ○ Also a series of fatal crashes that greatly reduced demand for Concorde flights
	  ○ The problem is that Concorde would have never been profitable for an airline. It was more of a novelty, way for rich people to show their class, or even an advertisement for BA or AF.

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	○ Do we want another supersonic transport jet? Maybe...probably not ■ Not very cost effective; also, COVID probably destroyed any chance of that happening in the near future Other Resources https://www.jstor.org/stable/26802349

Summary

Supersonic Transport aircraft were well ahead of their time. While Concorde was the most notable, the Soviets also designed a lesser known version, the Tupolev 144. Ultimately, these types of aircraft proved to be expensive to maintain, relatively dangerous, and unprofitable, which led to their demise. Still, the wonder and technological prowess required to achieve such a feat has not been lost on most people.