

Handout: How to Assess the Plausibility of a Sci-Fi Technology

Headline vs. Source

Start with the claim (e.g., "Scientists 'beam' across 143 kilometers"; Welt, 2012) and check if it originates from peer-reviewed research, a patent, or just a press release.

Scientific Foundations

Does the technology build on established principles of physics, biology, or engineering? Or does it contradict what we know (e.g., perpetual motion, faster-than-light travel)?

State of the Art (Technology Stages)

- **Concept / Theory:** Exists only as an idea or equation (e.g., time travel paradoxes).
- **Lab Experiment:** Demonstrated under highly controlled conditions (e.g., quantum teleportation of particles).
- **Prototype:** An early working model tested on a small scale (e.g., brain-computer interfaces).
- **Applied / Pilot Project:** Tested in real-world conditions (e.g., autonomous cars, CRISPR therapy).
- **Commercial / Everyday Use:** Widely available to the public (e.g., smartphones, GPS, drones).
- *The closer a technology is to "Commercial," the less speculative it is.*

Resources & Infrastructure

Does the technology require extreme costs, rare materials, or major global infrastructure changes?

Time Horizon

What are expert estimates? Are we talking about 5 years, 50 years, or "not in our lifetime"?

Societal & Ethical Barriers

- **Political / Economic:** Would governments, industries, or militaries allow it?
- **Moral / Ethical:** Would society accept it, or is it too dangerous or controversial (e.g., human cloning, autonomous weapons)?

Hype vs. Reality

Is this technology primarily reported in popular media and speculative blogs, or do you find cautious discussion among actual experts?

Expert Consultation

Asking specialists (in conferences, correspondence, or interviews) can reveal nuances that are missing in popular accounts. Even brief expert statements may significantly shift an assessment.

Transparency & Secrecy

Some fields (especially military, security, and biotech) deliberately restrict access to knowledge. A lack of open information can signal either early-stage research or classified development.

- Be cautious: Secrecy can fuel conspiracy theories, but it is also a real factor in assessing technological plausibility.

This material was provided by the Department of Media Psychology, Institute for Media Research, Chemnitz University of Technology for the workshop "From Sci-Fi to Science" by Dr. Georg Valtin.



across

