SIMUN VII

MED PERSONALITY PORTFOLIO

In a crisis committee, understanding the individuals you represent is the key to strategic and authentic decision-making. The Personality Portfolio serves as your primary reference for the historical, professional, and personal traits of the key figures involved in the Manhattan Engineer District (MED): the organization behind the Manhattan Project during World War II.

Each personality listed here was instrumental in shaping one of the most consequential scientific and military undertakings in history: the creation of the atomic bomb. Beyond their titles and accomplishments, these figures had distinct temperaments, political leanings, moral stances, and working styles. In a crisis setting, these nuances define how delegates can realistically respond to developments, form alliances, and craft private directives that reflect both historical accuracy and logical character behavior.

Understanding your personality's powers and influence is especially vital. Figures such as General Leslie Groves wielded enormous authority over logistics, funding, and military security, while scientists like Oppenheimer, Fermi, and Lawrence controlled the scientific direction, research breakthroughs, and the moral debates surrounding nuclear weapons. Recognizing these spheres of power allows delegates to write more targeted and believable directives, whether that means ordering resource reallocations, initiating covert research, strengthening security, or managing public information leaks.

The portfolio also clarifies the hierarchical and interpersonal dynamics within the MED. Knowing who respects whom, who clashes with whom, and which personalities share ideological common ground helps delegates navigate both collaboration and conflict. In a high-pressure crisis environment, leveraging these relationships can determine whether the committee succeeds or collapses under internal division.

Ultimately, this Personality Portfolio transforms historical knowledge into strategic utility. By combining biographical insight with power analysis, it equips delegates to think, act, and decide not just as participants in a simulation, but as the real historical figures whose actions reshaped the modern world.

The Personality Portfolio Will Contain

The Personality Portfolio will serve as a comprehensive guide to the key figures of the Manhattan Engineer District (MED), allowing delegates to understand their assigned personality's background, authority, and sphere of influence within the crisis. Each entry will outline not only who these individuals were, but also what powers they hold within the simulation, making private directives more realistic, strategic, and historically accurate.

Each portfolio entry will include the following components:

1. **Name and Designation**: The full name, title, and position of the individual within the MED, establishing their formal rank and influence in the committee hierarchy.
2. **Background and Expertise**: A concise overview of the figure's academic, scientific, or military background, explaining how their experience connects to their role in the Manhattan Project. This helps delegates understand the professional strengths that can support their directives.
3. **Role in the Manhattan Project**: A detailed description of the figure's official responsibilities, areas of oversight, and specific contributions to the atomic bomb's development. This determines what aspects of the project they can command or influence.
4. **Personality Traits and Leadership Style**: Insight into the individual's temperament, decision-making habits, and leadership approach. This helps delegates write directives and speeches in-character, reflecting their figure's real personality and style.
5. **Alliances and Rivalries**: A summary of the figure's key allies, opponents, and ideological alignments within the MED. This guides delegates in forming partnerships or opposition blocs in the committee.
6. **Ethical or Political Stance**: The character's view on the moral and political dilemmas surrounding the atomic bomb, secrecy, and wartime conduct. This section supports debates and directives on ethical use or post-war policy.
7. **Powers and Authority**: A breakdown of the character's direct control in the simulation. Understanding these powers is essential for crafting effective **private directives**.

**Details on chair-controlled//chair-represented personalities are stated in the study guide*

P.S. Delegates are advised to ctrl + F their personalities

Colonel Kenneth D. Nichols

Deputy District Engineer, Manhattan Engineer District (U.S. Army Corps of Engineers)

Background and Expertise

Colonel Kenneth David Nichols was a career military engineer in the U.S. Army Corps of Engineers, known for his exceptional skill in managing large-scale construction and logistics under wartime conditions. He graduated from the U.S. Military Academy at West Point and later earned an M.S. in Civil Engineering from Cornell University. Before joining the Manhattan Project, Nichols had already established a strong reputation for organizing and completing massive industrial and infrastructure projects, including work on early atomic research facilities.

His combined expertise in engineering, logistics, and administration made him one of the few officers capable of bridging the gap between the scientific community and military command. His efficient, pragmatic approach allowed the MED to coordinate the construction of highly complex and secretive facilities across multiple states.

Role in the Manhattan Project

As the Deputy District Engineer, Nichols served directly under General Leslie R. Groves and was responsible for coordinating the physical construction, procurement, and logistical management of key Manhattan Project sites, including Oak Ridge (uranium enrichment), Hanford (plutonium production), and Los Alamos (weapon assembly).

Nichols managed the allocation of manpower, raw materials, and industrial contracts, ensuring the project maintained momentum despite resource shortages and secrecy constraints. He acted as the liaison between the scientific staff and military administration, translating research goals into tangible engineering operations.

His influence extended into financial and security operations, often approving contracts, managing classified shipments, and enforcing strict efficiency standards across all MED sites.

Personality Traits and Leadership Style

Nichols was methodical, assertive, and results-driven, known for his no-nonsense discipline and pragmatic problem-solving. Unlike some of the more idealistic scientists on the project, he prioritized operational success and wartime efficiency over philosophical debate.

He was loyal to General Groves and upheld the chain of command rigorously, yet he maintained a professional respect for scientific expertise, often mediating between military demands and the intellectual independence of researchers. Nichols' leadership style combined military precision with managerial flexibility, allowing him to maintain order without entirely alienating the civilian scientists under his supervision.

Alliances and Rivalries

- **Allies:** General Leslie R. Groves (military superior and close collaborator), industrial engineers, and administrative staff focused on logistics.
- **Rivalries:** Some tension with theoretical scientists, particularly those frustrated by military secrecy and strict deadlines. Figures like Oppenheimer or Bohr may challenge his authority on ethical or technical grounds.
- **Neutral Relations:** Maintains a balanced rapport with most figures in the MED, serving as an intermediary between competing factions.

Ethical or Political Stance

Nichols viewed the Manhattan Project as a military necessity, not a philosophical experiment. He believed the atomic bomb's development was justified as long as it ended the war swiftly and saved Allied lives. While he respected the scientists' concerns about moral responsibility, he consistently prioritized national duty, secrecy, and efficiency. Politically, Nichols supported strict government control over atomic research and opposed sharing nuclear knowledge with allies or civilians during wartime.

Powers and Authority

As Deputy District Engineer, Nichols holds significant logistical and administrative power within the committee:

- Controls supply chains for all major project sites.
- Approves or denies construction and resource allocations.
- Can mobilize engineering teams, allocate transport, and redirect manpower between facilities.
- Can impose military orders.
- May request additional funding or materials from the War Department through the Chair.
- Have access to General Leslie R. Groves' office and files.
- Approve or redirect construction projects.
- Authorize transport or supply missions for key materials or personnel.
- Conduct internal audits to expose inefficiency or corruption.
- Reallocate manpower from nonessential projects to priority research.
- Enforce disciplinary measures or order investigations into suspected espionage
- Withholding or granting crucial logistical materials.
- Sabotage rival projects or secretly back alternative methods.

George L. Harrison

Special Assistant to the Secretary of War / Administrative Liaison to the Manhattan Engineer District

Background and Expertise

George Leslie Harrison was a prominent American banker, administrator, and policymaker, serving as the President of the Federal Reserve Bank of New York before his appointment as Special Assistant to Secretary of War Henry L. Stimson during World War II. Educated at Yale University and Harvard Law School, Harrison possessed deep expertise in finance, government administration, and strategic planning, skills that proved indispensable to managing the vast fiscal and bureaucratic operations of the Manhattan Project.

His close personal and professional relationship with Secretary Stimson gave him unique access to both military and civilian policymaking circles, allowing him to act as the crucial link between the War Department, the Treasury, and the scientific administrators of the MED. Harrison's influence ensured that the Manhattan Project received steady funding, political protection, and secrecy clearance from Washington's uppermost echelons.

Role in the Manhattan Project

Harrison's role was that of the administrative and political overseer who connected the Manhattan Engineer District with the highest levels of the U.S. government. Working directly under Stimson, he coordinated inter-departmental communication, oversaw budget authorizations, and secured long-term financial and logistical stability for the Project. He ensured that congressional inquiries were avoided, sensitive information remained classified, and the Project maintained a streamlined relationship with the Office of Scientific Research and Development (OSRD). Harrison's office often served as the gateway for policy approval, determining what information reached Stimson, the White House, or other federal agencies.

In short, he acted as the political shield and financial gatekeeper of the Manhattan Project, ensuring that bureaucracy never interfered with progress.

Personality Traits and Leadership Style

Harrison was calm, analytical, and deeply strategic, embodying the personality of a seasoned bureaucrat. He preferred quiet influence over overt authority, leveraging his connections to get results without confrontation.

He was methodical and patient, preferring persuasion and negotiation to command-and-control leadership. While not a military man, he was highly disciplined and viewed his civilian expertise as essential to the war effort. Delegates playing Harrison should emphasize composure, intelligence, and behind-the-scenes maneuvering, using diplomacy and administrative control to achieve outcomes.

Alliances and Rivalries

- **Allies: Secretary** Henry L. Stimson (his superior and mentor), General Leslie R. Groves (for mutual coordination on project funding and secrecy), and administrative figures like Nichols and Conant.
- **Rivalries:** May clash with scientists like Oppenheimer or Bohr, who push for transparency or international cooperation. Some military officers may perceive him as overly cautious or bureaucratic.
- **Neutral Relations:** Maintains formal but distant relations with most scientific staff, focusing on macro-level policy rather than lab disputes.

Ethical or Political Stance

Harrison strongly believed in the necessity of absolute secrecy and strict civilian oversight of nuclear research. He viewed the Manhattan Project as a strategic imperative to end the war and secure postwar American leadership.

Ethically, he supported developing and using the bomb if it shortened the conflict, but also emphasized the need for postwar regulation and control of nuclear weapons. He distrusted both political populism and scientific idealism, believing that decisions about the bomb should remain within the highest circles of government and the military.

Powers and Authority

As the administrative liaison and financial overseer, Harrison wields considerable bureaucratic and fiscal influence in the committee:

- Controls access to high-level War Department funding.
- Has direct access to Secretary Stimson's office and files.
- Can suppress, delay, or leak information to influence government perception or control internal politics.
- Authorized to intervene in classified administrative decisions affecting the entire MED.
- Redirect the War Department budgets toward different projects.
- Approve or block major financial expenditures for laboratory or construction work.
- Authorize public statements or official memos to influence external agencies or congressional sentiment.
- Investigate potential financial mismanagement or corruption within the MED.
- Secretly leak information to secure political leverage.

Dr. Vannevar Bush

Director, Office of Scientific Research and Development (OSRD) / Chief Scientific Administrator to the Manhattan Engineer District.

Background and Expertise

Dr. Vannevar Bush was one of America's most influential engineers, inventors, and scientific administrators during World War II. A graduate of Tufts College, with advanced degrees from MIT and Harvard, Bush was a pioneer in electrical engineering, computation, and research organization. Before the war, he served as Dean of Engineering at MIT and President of the Carnegie Institution for Science, where he championed the integration of science into national defense and policy.

In 1941, President Franklin D. Roosevelt appointed him as the head of the Office of Scientific Research and Development (OSRD), a powerful federal agency that coordinated all wartime scientific research, including radar, medical innovations, and ultimately, nuclear fission. Bush's ability to unite government, academia, and industry made him the architect of America's scientific mobilization during the war and a key political force behind the creation of the Manhattan Engineer District (MED).

Role in the Manhattan Project

As Director of the OSRD, Bush was not directly involved in laboratory research but was instrumental in the creation, funding, and political protection of the Manhattan Project. It was Bush who, after early consultations with scientists like Einstein and Compton, persuaded Roosevelt to approve the large-scale development of an atomic weapon.

Once the project began, Bush maintained oversight of scientific policy, budget justification, and strategic coordination with the War Department. He ensured that the OSRD and the MED worked in tandem, balancing military urgency with scientific freedom. His authority also extended to managing relationships with key scientific figures like James B. Conant, Ernest Lawrence, and Arthur Compton, ensuring that academic institutions remained committed to wartime research.

Personality Traits and Leadership Style

Bush was intellectual, commanding, and politically astute, with a strong belief in the power of organized science as the key to national progress. He valued efficiency, delegation, and foresight, preferring to lead from above rather than micromanage.

Delegates playing Bush should adopt the demeanor of a calm, authoritative strategist, someone who influences the direction of the committee not through direct orders, but through persuasion, credibility, and institutional leverage. He was known to be impatient with bureaucracy yet cautious in decision-making, preferring measured, well-reasoned plans over impulsive experimentation.

Alliances and Rivalries

- **Allies:** James B. Conant (OSRD deputy and fellow scientific administrator), George L. Harrison (administrative ally), and J. Robert Oppenheimer (trusted scientific mind).
- **Rivalries:** General Leslie R. Groves and other military officers, whose rigid command structures sometimes clashed with Bush's belief in scientific independence.
- **Neutral Relations:** Maintained formal respect for both scientists and military officials, though he often acted as a mediator between their conflicting interests.

Ethical or Political Stance

Bush viewed the atomic bomb as both a necessary wartime weapon and a moral burden that must be carefully managed by responsible leadership. He supported the weapon's development but also warned that postwar control of nuclear energy would determine humanity's future.

Politically, Bush was a civilian advocate; he believed that after the war, scientific research should be placed under civilian, not military, authority. His foresight would later inspire the creation of the National Science Foundation and postwar science policy in the United States.

Powers and Authority

As the head of the OSRD and chief scientific liaison, Bush holds high-level political, financial, and intellectual influence within the committee:

- Can lobby the U.S. government or the President through direct reports to expand or reduce project priorities.
- Can approve or deny scientific collaborations with universities, private labs, and industrial contractors.
- May authorize recruitment or dismissal of scientific personnel across project sites.
- Can impose ethical oversight or policy reviews on scientific actions.
- Has access to inter-agency communications, including intelligence reports and political briefings.
- Petition the War Department or the President for more funding or additional oversight power.
- Authorize partnerships between research institutions (e.g., MIT, University of Chicago, or Berkeley).
- Conduct ethical reviews on experimental practices or human testing proposals.
- Leak information to political allies or use classified reports to manipulate internal power balances.
- Advance postwar planning for civilian control of nuclear energy or propose early international treaties.

Colonel Franklin T. Matthias

U.S. Army Corps of Engineers / Construction Director, Hanford Engineer Works (Manhattan Engineer District)

Background and Expertise

Colonel Franklin Thompson Matthias was a civil engineer and U.S. Army officer whose expertise lay in large-scale construction and logistical coordination. A graduate of the University of Wisconsin, Madison, with a degree in civil engineering, Matthias had extensive experience with dam and military base construction projects under the Army Corps of Engineers before joining the Manhattan Project.

His engineering precision, logistical acumen, and reputation for efficiency caught the attention of General Leslie R. Groves, who appointed him to oversee one of the most secret and complex projects in the world, the construction of the Hanford Engineer Works in Washington State, the massive facility responsible for producing plutonium for the atomic bomb.

Role in the Manhattan Project

As Construction Director of the Hanford Site, Matthias was responsible for transforming a barren stretch of desert into one of the largest and most advanced industrial complexes of the war. His duties included:

- Overseeing construction of reactors, chemical separation plants, and support facilities.
- Managing tens of thousands of workers, engineers, and contractors.
- Maintaining strict secrecy and security in coordination with the MED's military police.
- Ensuring that the site met Groves' tight deadlines and quality standards, with minimal interference from civilian authorities.

Matthias's efficiency and loyalty to Groves made him one of the most trusted field commanders in the entire Manhattan Project. His successful completion of Hanford on schedule directly enabled the production of plutonium used in the "Fat Man" bomb dropped on Nagasaki.

Personality Traits and Leadership Style

Matthias was known for being direct, no-nonsense, and highly pragmatic. He embodied the classic engineer-soldier, focused on results, intolerant of inefficiency, and loyal to the command structure. He valued discipline, precision, and clear communication, often preferring to act decisively rather than debate endlessly.

Delegates portraying Matthias should adopt a tone of controlled authority and field command, representing a man who works under intense pressure but expects complete professionalism from subordinates. Though respected for his competence, Matthias could be rigid and impatient with scientists or bureaucrats who delayed progress for theoretical concerns or red tape.

Alliances and Rivalries

- **Allies:** General Leslie R. Groves (direct superior and chief patron), Colonel Kenneth Nichols (shared engineering and logistical goals), and industrial contractors like DuPont (construction partners).
- **Rivalries:** Academic scientists or administrators who attempted to question his military discipline or methods, such as Vannevar Bush or J. Robert Oppenheimer (in context of operational interference).
- **General Standing:** A loyal military engineer aligned with Groves's camp, advocating for secrecy, efficiency, and military oversight of all project operations**.**

Ethical or Political Stance

Matthias was apolitical and pragmatic, viewing his mission purely through the lens of engineering and duty. He rarely engaged in moral or political debates about the bomb's use, for him, success meant completing the project safely, secretly, and on time.

He believed in the chain of command and the sanctity of orders, often dismissing ethical objections as distractions during wartime. However, his later reflections acknowledged the immense power and responsibility that the project represented, suggesting a man aware of, but not guided by, moral hesitation.

Powers and Authority

As Construction Director of the Hanford Engineer Works, Matthias holds substantial field, logistical, and security authority within the Manhattan Engineer District:

- Construction Oversight and direct command over all Hanford construction crews, engineers, and laborers.
- Can requisition materials, vehicles, and personnel from the Army Corps or MED stockpiles.
- Can impose or lift lockdowns, authorize internal investigations, or order the detainment of suspected leaks or saboteurs.
- Can approve or terminate private contracts with firms like DuPont or local subcontractors.
- Reports directly to Groves and Nichols, giving him access to high-level logistical intelligence.
- Can declare engineering emergencies or site evacuations in response to accidents, leaks, or sabotage.
- Expand or modify construction operations at Hanford
- Authorize troop deployment or security crackdowns in response to espionage threats or worker unrest.
- Request material shipments or labor reinforcements from other MED divisions.
- Negotiate with contractors to accelerate or modify designs (potentially cutting costs or increasing risks).

- Approve covert engineering operations, such as constructing a secondary, classified test site.
- Suppress information leaks or silence whistleblowers under security protocol.
- Cutting safety corners to meet deadlines, leading to accidents or contamination.
- Misallocating resources for personal or experimental purposes.
- Clashing with scientists or administrators, causing inefficiency or data silos.
- Authorizing excessive force in handling internal dissent or security breaches.

Delegates should remember that Matthias is not a policy-maker or moral philosopher; his influence lies in execution, discipline, and field command. His directives are most effective when tied to logistics, engineering, or on-ground operations, serving as the muscle and machinery of Groves's broader strategic vision.

Colonel Stafford L. Warren

Chief Medical Officer, Manhattan Engineer District (U.S. Army Medical Corps)

Background and Expertise

Colonel Stafford Leak Warren was a medical doctor, radiologist, and public health expert who played a crucial role in the safe management of the Manhattan Project's radiation-related operations. He graduated from the University of California, Berkeley, and earned his M.D. from the University of California, San Francisco, later serving as a professor of radiology at the University of Rochester.

Before joining the Manhattan Engineer District, Warren conducted pioneering research in medical radiology and X-ray technology, giving him unparalleled insight into radiation's biological effects, a critical area of expertise in atomic research. In 1943, General Leslie Groves appointed him as the Chief Medical Officer of the project, placing him in charge of all health, safety, and medical operations across Manhattan Project sites.

His background uniquely combined scientific precision, administrative competence, and ethical concern, traits that often set him apart from the purely militaristic or industrial minds around him.

Role in the Manhattan Project

As Chief Medical Officer, Colonel Warren was responsible for the health and safety of all personnel involved in the Manhattan Project, spanning multiple research and production sites such as Los Alamos, Hanford, and Oak Ridge. His duties included:

- Establishing radiation safety protocols for laboratory and reactor staff.
- Conducting medical research on radiation exposure, contamination, and long-term biological risks.
- Supervising medical personnel, decontamination teams, and safety inspectors across MED sites.
- Advising military command and scientific leaders on hazard containment, protective equipment, and emergency responses to accidents.
- Investigating and mitigating incidents involving radiation leaks, worker illnesses, or contamination.

Warren also led the radiation safety and monitoring team during the Trinity Test, the world's first nuclear detonation. where he was tasked with assessing fallout, medical risk, and environmental impact. His meticulous record-keeping and strict protocols saved countless lives and helped establish modern standards for nuclear safety.

Personality Traits and Leadership Style

Warren was analytical, methodical, and morally grounded, often serving as the conscience of the Manhattan Engineer District. Though a disciplined officer, he prioritized human safety over military expedience, frequently clashing with those who dismissed medical warnings in the rush for progress.

He approached leadership through rational persuasion rather than authority, preferring to educate and convince rather than command. His tone was professional and steady, but his commitment to ethical science often put him at odds with those who viewed the atomic bomb solely as a wartime necessity.

Delegates portraying Warren should emulate his calm intelligence and moral balance, the embodiment of scientific duty under military constraint.

Alliances and Rivalries

- **Allies:** Vannevar Bush (shares emphasis on scientific ethics), J. Robert Oppenheimer (concerned with moral responsibility), and some civilian scientists focused on research integrity.
- **Rivalries:** Colonel Kenneth D. Nichols and General Leslie R. Groves (who often prioritized efficiency over safety).
- **Neutral Relations:** Maintains professional relations with most MED figures but often finds himself philosophically isolated in a militarized environment.

Warren's alliances often lean toward academic or humanitarian delegates, forming a faction that advocates for transparency, medical safety, and ethical restraint in atomic development.

Ethical or Political Stance

Colonel Warren viewed the atomic project as a necessary evil but one demanding strict ethical oversight. He believed scientific progress could not come at the expense of human lives or moral integrity. While loyal to the U.S. war effort, he opposed the reckless use of nuclear technology and warned repeatedly about radiation's long-term consequences for both workers and civilians.

Politically, Warren favored post-war medical transparency and international cooperation on radiation safety, though he remained bound by secrecy during the project. His stance was not anti-bomb, but anti-negligence.

Powers and Authority

As Chief Medical Officer of the Manhattan Engineer District, Warren possesses specialized authority over all health, biological, and safety-related matters across the project:

- Medical Oversight and full control over medical staff, field hospitals, and first-aid stations at all MED sites.
- Can enforce radiation safety regulations, suspend unsafe experiments, or mandate decontamination procedures.
- May initiate lockdowns or quarantines following accidents, exposure, or contamination.
- Authorized to conduct health audits and safety inspections, including inquiries into concealed radiation mishaps.
- Enforce or suspend laboratory operations on health and safety grounds.
- Demand classified health reports from laboratories or administrative divisions.
- Collaborate with scientists to reduce radiation exposure or monitor fallout.
- Alert the chair to unethical activity, such as unauthorized human testing or data concealment.
- Withholding safety data to maintain secrecy or favor certain projects.
- Conducting unethical radiation experiments on unaware subjects.
- Falsifying medical reports to keep facilities operational.

Delegates should recognize that Warren's influence is not measured in weapon output or funding; it lies in information, oversight, and integrity. He is a character of quiet power, capable of changing the course of operations by invoking health, ethics, or safety, often forcing others to confront the human cost of their ambition**.**

Captain William S. Parsons

Ordnance Officer and Head of Weapon Assembly Division, Manhattan Engineer District (U.S. Navy)

Background and Expertise

Captain William Sterling Parsons was a distinguished officer in the U.S. Navy Ordnance Division, renowned for his technical brilliance in ballistics, weapon assembly, and naval aviation ordnance systems. A graduate of the U.S. Naval Academy (Annapolis, 1922), Parsons built his career around the development of advanced weaponry, including fuses and aerial bombs. Before joining the Manhattan Project, he gained prominence for his work on proximity fuses, a critical innovation that revolutionized naval warfare and later contributed to the atomic bomb's detonation mechanism.

By 1943, Parsons' unique combination of military precision and engineering expertise led General Leslie R. Groves and J. Robert Oppenheimer to appoint him as the Head of the Ordnance Division at Los Alamos. His role made him one of the few Navy officers deeply embedded in a primarily Army-led operation, bridging the gap between scientific theory and battlefield practicality.

Role in the Manhattan Project

As the Ordnance Chief at Los Alamos, Captain Parsons was responsible for the weaponization and delivery systems of the atomic bomb. His duties included:

- Overseeing the design, assembly, and arming mechanisms of the bomb.
- Ensuring that scientific designs could be translated into combat-ready weapons.
- Supervising the final assembly of the "Little Boy" uranium bomb aboard the *Enola Gay*.
- Coordinating with physicists, engineers, and military logistics teams to ensure safe transportation and operational readiness.
- Integrating naval expertise into the air-delivery system, ensuring the bomb's detonation sequence functioned flawlessly under combat conditions.

Parsons personally armed the atomic bomb over Hiroshima on August 6, 1945, making him not only a central technical figure but also a direct participant in one of history's most consequential missions.

Personality Traits and Leadership Style

Captain Parsons was disciplined, decisive, and technically exacting, the epitome of military professionalism fused with scientific pragmatism. Known for his calm under pressure and meticulous attention to detail, he earned the respect of both soldiers and scientists.

He maintained a measured, methodical approach to leadership, emphasizing precision and procedure over speculation or emotion. Unlike many scientists on the project, Parsons saw the atomic bomb primarily as a weapon to end the war, not as a philosophical dilemma. However, he possessed a deep sense of duty and caution, understanding the catastrophic stakes of any miscalculation.

Delegates playing Parsons should balance military resolve with technical insight, embodying the figure who turned theory into lethal efficiency.

Alliances and Rivalries

- **Allies:** General Leslie R. Groves (shared military efficiency and secrecy), Colonel Kenneth D. Nichols (logistical coordination), and applied physicists or engineers involved in bomb assembly (e.g., George Kistiakowsky).
- **Rivalries:** Theoretical scientists such as Niels Bohr or Oppenheimer during ethical debates about use or deployment speed; also occasional friction with Army administrators due to Navy affiliation.
- **Neutral Relations:** Maintains professional but distant relations with medical and ethical figures like Colonel Stafford L. Warren, whose safety protocols occasionally delayed ordnance testing.

Parsons often served as a bridge between military command and laboratory operations, advocating for rapid testing and practical readiness even when others sought more deliberation.

Ethical or Political Stance

Parsons firmly believed that the atomic bomb's deployment was militarily justified and morally defensible if it brought an end to the war. His focus remained on precision, safety, and mission success, not political debate. However, his firsthand role in arming the bomb deeply impacted him personally; after the war, he became a cautious advocate for nuclear control and responsible stewardship.

He distrusted political interference in scientific progress but supported strict military oversight to prevent atomic proliferation. In the committee, he represents military pragmatism and operational control, prioritizing results over rhetoric.

Powers and Authority

As Head of Ordnance and Weapon Assembly, Captain Parsons holds broad authority over all aspects of the Manhattan Project related to weaponization, testing, and delivery readiness:

- Can approve or halt bomb construction phases at Los Alamos.
- Can initiate or oversee internal bomb component testing.
- Direct influence over air-drop mechanisms, fusing systems, and detonation design.
- Authority over Navy personnel and coordination with Army Air Forces for weapon deployment.

- Can request or redistribute mechanical engineers, ordnance materials, and bomb casings between projects.
- Authorize or modify bomb assembly procedures at Los Alamos.
- Collaborate with scientists to improve detonation mechanisms or fuse reliability.
- Oversee transport and delivery systems, including test drops or live mission preparations.
- Establish ordnance teams for on-site construction or emergency bomb repairs.
- Secure collaboration with Air Force officers or pilots for training simulations.
- Authorizing unauthorized field trials to gain favor with superiors.
- Sabotaging rival designs (e.g., plutonium vs. uranium) to push his preferred model.
- Withholding test data for personal leverage in directives or negotiations.

Parsons' portfolio offers delegates a powerful military-technical toolkit: he controls how theory becomes weapon, and his actions can make or break the bomb's functionality and deployment timeline. His influence is both tactical and symbolic, the man who ensures the bomb doesn't just exist, but *works*.

Lt. Colonel James C. Marshall

Initial District Engineer, Manhattan Engineer District (U.S. Army Corps of Engineers)

Background and Expertise

Lieutenant Colonel James Creel Marshall was a career military engineer in the U.S. Army Corps of Engineers, trained at the United States Military Academy at West Point (Class of 1929). Before his involvement with the Manhattan Project, he had a distinguished record managing large-scale military construction projects, including airfields and industrial facilities critical to wartime mobilization.

Marshall was known for his organizational discipline, logistical acumen, and cautious leadership, qualities that made him one of the earliest officers entrusted with the atomic program's infrastructure. In June 1942, he was appointed to lead the newly formed Manhattan Engineer District (MED) before General Leslie R. Groves later assumed command.

While his tenure as project head was brief, Marshall laid the foundational groundwork for what became the most ambitious scientific-military project in history.

Role in the Manhattan Project

As the first District Engineer of the Manhattan Engineer District, Lt. Col. Marshall was tasked with initiating and organizing the project's administrative, engineering, and logistical framework. His primary duties included:

- Selecting suitable sites for uranium enrichment and reactor construction.
- Coordinating early contracts, budgeting, and procurement operations with the U.S. Army Corps of Engineers.
- Recruiting key personnel and setting up the district's command structure.
- Managing early research coordination between the Army, the Office of Scientific Research and Development (OSRD), and university laboratories.

Though replaced by Brig. Gen. Leslie R. Groves in September 1942 due to perceived slow progress, Marshall continued serving under the MED, assisting with engineering coordination and site development, particularly in Oak Ridge and Hanford. His administrative and technical foundations allowed the later success of Groves and Nichols to unfold smoothly.

Personality Traits and Leadership Style

Lt. Col. Marshall was meticulous, methodical, and cautious, often prioritizing thorough planning over rapid execution. His leadership style reflected that of a measured engineer rather than an aggressive commander. While this made him effective in managing technical details and administrative organization, it also led superiors to view him as overly conservative for the urgency of wartime research.

In committee, delegates playing Marshall should portray a grounded, detail-oriented officer, one who values structure, chain of command, and procedural correctness. He is less impulsive than his successors but offers stability, clear reasoning, and an engineer's analytical mindset.

Alliances and Rivalries

- **Allies:** Colonel Kenneth D. Nichols (shared engineering focus and Corps of Engineers background); Colonel Franklin T. Matthias (site construction ally).
- **Rivalries:** General Leslie R. Groves (who replaced him as MED head); some scientific figures like Oppenheimer, who viewed his administration as too bureaucratic.
- **Neutral Relations:** Maintains professionalism with all parties but is often underestimated or sidelined by more dominant personalities.

Marshall can be a stabilizing figure in alliances, ensuring order and procedure amidst the chaos of scientific and military ambition.

Ethical or Political Stance

Lt. Col. Marshall approached the Manhattan Project as a technical and logistical assignment, not a moral crusade. He supported its mission to win the war through technological superiority but avoided direct involvement in debates over the bomb's ethical use.

He believed in military secrecy, disciplined command, and chain-of-authority control, opposing any civilian or political interference in classified operations. Marshall represents a purely administrative patriotism, loyal to the mission, even if not fully grasping its long-term implications.

Powers and Authority

As a District Engineer and senior Corps of Engineers officer, Lt. Col. Marshall controls the structural, logistical, and administrative backbone of the MED:

- Infrastructure Oversight and authority over base construction, equipment procurement, and resource allocation for new sites.
- Can approve, redirect, or halt contracts with industrial partners or construction firms.
- Control over the movement of equipment, materials, and workforce between MED facilities.
- Can propose or modify site layouts, facilities expansion, or logistical operations.
- May correspond with the Army Corps of Engineers and the War Department on behalf of the committee.
- Authorize or redirect construction projects.
- Reassign manpower between Oak Ridge, Hanford, and Los Alamos to balance progress.

- Audit and streamline supply chains to remove inefficiency or corruption.
- Negotiate or enforce industrial contracts with private companies (DuPont, Union Carbide, etc.).
- Expand logistical infrastructure, such as rail lines, power plants, and housing facilities.
- Collaborate with Nichols or Matthias to resolve construction delays or bottlenecks.
- Reclaim administrative control over budgetary or engineering matters through strong directives.
- Misallocating resources for personal alliances.
- Leaking administrative data to influence political or military outcomes.

In the simulation, Marshall represents organizational discipline and structural control, the architect behind the MED's machinery. While not the most charismatic or politically powerful, his command over engineering, logistics, and site management makes him indispensable to maintaining operational stability or, in times of crisis, controlling the project's physical backbone.

Dr. J. Robert Oppenheimer

Scientific Director, Los Alamos Laboratory (Theoretical Physicist)

Background and Expertise

Julius Robert Oppenheimer was one of the most brilliant theoretical physicists of his generation, often referred to as the “father of the atomic bomb.” Educated at Harvard and the University of Göttingen, he contributed significantly to quantum mechanics, nuclear physics, and cosmic ray theory before the war. Known for his sharp intellect and broad cultural sophistication, Oppenheimer brought both visionary leadership and philosophical depth to the Manhattan Project.

Prior to Los Alamos, he held professorships at the University of California, Berkeley, and Caltech, mentoring many young physicists who would later join him on the project. His ability to synthesize diverse scientific ideas and unite brilliant but difficult minds made him uniquely suited to direct the Los Alamos Laboratory, the core of atomic weapon design and assembly.

Role in the Manhattan Project

As Scientific Director of Los Alamos, Oppenheimer oversaw the design, theoretical modeling, and practical assembly of the world’s first nuclear weapons. His leadership turned a collection of the nation’s top physicists, chemists, and engineers into a cohesive unit working toward one of history’s most ambitious goals.

He coordinated research on uranium and plutonium bomb designs, guided experimental testing, and ultimately led the successful Trinity Test in July 1945. Oppenheimer’s laboratory was the intellectual heart of the Manhattan Project, where theoretical innovation met military application.

Despite frequent clashes with military personnel over secrecy and autonomy, his charisma and intellectual command ensured continued collaboration across scientific teams.

Personality Traits and Leadership Style

Oppenheimer was charismatic, intense, and intellectually commanding, often described as both inspiring and intimidating. He possessed a poetic, philosophical outlook that made him reflective about the moral implications of the bomb’s creation.

His leadership style relied on persuasion, collaboration, and an almost magnetic ability to inspire creativity among his team. However, he could be unpredictable, deeply empathetic one moment, then coldly pragmatic the next. His idealism occasionally clashed with the rigid military discipline enforced by General Groves and Colonel Nichols.

Alliances and Rivalries

Allies: Many senior scientists, including Enrico Fermi, Ernest Lawrence, and Niels Bohr, respected and supported his leadership, along with anyone who advocates of scientific freedom and open collaboration.

Rivalries: General Leslie R. Groves (mutual respect, frequent conflict over secrecy and control), Military officers who viewed him as too idealistic or politically unreliable, and Edward Teller, due to differing visions on thermonuclear research and moral philosophy.

Neutral Relations: Administrative staff and non-scientific officers, who saw him as brilliant but aloof.

Ethical or Political Stance

Oppenheimer believed the bomb was a grim necessity, a tool to end the war but also a burden of moral consequence. He often expressed doubt about the long-term impact of nuclear weapons, advocating for postwar international control and scientific transparency.

Politically, he leaned liberal and opposed excessive military secrecy. His sympathy for open scientific exchange, as well as his past associations with left-wing figures, later made him a controversial figure during the early Cold War.

Powers and Authority

As Scientific Director of Los Alamos, Oppenheimer holds immense scientific and administrative authority within the Manhattan Engineer District (MED):

- Controls all research and experimental operations at Los Alamos.
- Approves project funding, personnel assignments, and laboratory priorities.
- Can authorize tests, simulations, or prototype constructions.
- Has the power to collaborate or withhold information from other divisions (e.g., Oak Ridge, Hanford).
- Can request classified data, scientific staff transfers, or equipment from other facilities.
- Has the authority to form internal committees or task forces for specialized projects.
- May appeal to Groves or Bush for expanded scientific autonomy.
- Initiate new theoretical or experimental research projects.
- Form or disband scientific teams to focus on specific weapon designs.
- Transfer scientists or request additional resources from other sites.
- Publish confidential scientific memoranda or restrict information access.
- Secretly leak or share limited data.
- Undermine or delay militarization efforts for moral reasons.

While Oppenheimer's powers are immense, they come with constant scrutiny from military superiors. His actions, whether noble or controversial, shape not only the success of the project but the very legacy of atomic warfare.

Dr. Enrico Fermi

Head of Experimental Physics Division, Los Alamos / Lead Physicist, Chicago Metallurgical Laboratory

Background and Expertise

Enrico Fermi was an Italian-American physicist and one of the most versatile scientific minds of the 20th century. Renowned for both his theoretical insight and experimental precision, he made foundational contributions to nuclear physics, quantum theory, and statistical mechanics.

Educated at the University of Pisa, Fermi became a leading figure in European physics before fleeing fascist Italy due to his wife's Jewish heritage. By the time he joined the Manhattan Project, he had already achieved fame for creating the first controlled nuclear chain reaction at the University of Chicago in December 1942, an achievement that proved the feasibility of the atomic bomb.

Fermi was one of the few physicists equally adept at theory and experiment, making him indispensable in bridging the gap between scientific concept and technical application.

Role in the Manhattan Project

Within the Manhattan Engineer District, Fermi served as a senior physicist and head of experimental physics efforts, first at the Chicago Metallurgical Laboratory and later at Los Alamos. His primary responsibility was to design, test, and refine the nuclear chain reactions necessary for both uranium and plutonium-based weapons.

He oversaw the construction of experimental piles (reactors), measured neutron behavior, and provided theoretical validation for key engineering assumptions. Fermi's calm precision and logical clarity made him the project's scientific anchor, someone capable of simplifying immensely complex problems into actionable steps.

During the Trinity Test, Fermi famously estimated the bomb's yield by observing how far scraps of paper were displaced by the shockwave, demonstrating his intuitive understanding of physics even in moments of crisis.

Personality Traits and Leadership Style

Fermi was pragmatic, disciplined, and quietly authoritative. He valued simplicity, accuracy, and order, qualities that earned him immense respect among his peers. Unlike the more philosophical or temperamental scientists, Fermi avoided moral or political debates, preferring to focus on the technical realities of the work at hand.

His teaching style was clear and methodical, often breaking down the most complex problems into manageable calculations. He inspired confidence through competence rather than charisma, and his unflappable demeanor provided stability amid the chaos of the project.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (scientific collaborator and mutual respect), General Leslie R. Groves and Kenneth Nichols (trusted him for precision and reliability), along with the mxperimental teams and engineers who appreciated his structured approach.

Rivalries: Edward Teller, due to Teller's speculative obsession with the hydrogen bomb and lack of discipline, Niels Bohr, on theoretical disagreements about the philosophical implications of nuclear physics and minor friction with younger, more idealistic scientists who viewed him as overly pragmatic.

Neutral Relations: Generally respected and admired by most personnel; avoided unnecessary conflicts.

Ethical or Political Stance

Fermi's primary focus was scientific progress and accuracy rather than ideology. Although he recognized the destructive potential of atomic energy, he viewed its development as an inevitable consequence of scientific discovery and wartime necessity.

Politically, Fermi remained cautious, disillusioned by fascism but distrustful of excessive idealism. After the war, he would advocate for international regulation of atomic power and responsible scientific conduct, but during the project, his loyalty remained to the mission's completion.

Powers and Authority

As Head of Experimental Physics, Fermi wields significant scientific and operational influence:

- Directs all experimental testing related to nuclear reactions and reactor designs.
- Controls laboratory access and determines experiment priorities at Los Alamos and Chicago.
- May request specialized materials (uranium, graphite, plutonium) or personnel transfers, under the name of research.
- Can form independent research cells for testing alternate weapon configurations.
- Holds classified knowledge of critical reaction data and reactor blueprints.
- Initiate experimental testing or reactor calibration.
- Approve or sabotage experimental results.
- Conceal or falsify scientific data for strategic or moral purposes.
- Develop backup prototypes or alternate bomb mechanisms.
- Authorize or delay tests for safety or ethical reasons.
- Secretly correspond with other scientists on moral or regulatory initiatives.

Fermi's role offers immense technical leverage, his data determines success or failure. However, his power is subtle: through precision, persuasion, and quiet authority, he shapes the Manhattan Project's pace, safety, and ultimate outcome without ever raising his voice.

Dr. Ernest O. Lawrence

Director, Radiation Laboratory, University of California, Berkeley / Head of Electromagnetic Separation Program

Background and Expertise

Ernest Orlando Lawrence was one of America's foremost experimental physicists and the inventor of the cyclotron, a groundbreaking particle accelerator that made the production of rare isotopes and the study of nuclear reactions possible. Educated at the University of South Dakota and Yale, Lawrence quickly rose to prominence for his visionary integration of physics and engineering.

By the time of the Manhattan Project, Lawrence was already a Nobel laureate (1939) for his invention of the cyclotron and a central figure in American nuclear research. His Radiation Laboratory at Berkeley became a critical hub for uranium enrichment research, attracting top-tier scientists and engineers.

Lawrence combined academic brilliance with industrial pragmatism, a rare scientist who could merge pure research with large-scale production goals.

Role in the Manhattan Project

Within the Manhattan Engineer District, Lawrence directed the electromagnetic separation process for uranium-235 at the Y-12 plant in Oak Ridge, using the calutron, a scaled-up version of his cyclotron technology.

He managed both scientific innovation and large-scale industrial coordination, often working closely with military engineers and private contractors. His mission was to refine uranium for the bomb's fissile core, balancing theoretical precision with engineering practicality.

Beyond his direct work, Lawrence served as a bridge between academia, government, and private industry, securing resources, building morale, and promoting collaboration between competing scientific divisions. His lab's success was instrumental in producing sufficient quantities of enriched uranium for the Hiroshima bomb ("Little Boy").

Personality Traits and Leadership Style

Lawrence was charismatic, optimistic, and fiercely patriotic, with a boundless energy that inspired those around him. He had an innate belief in the moral value of science serving national defense and often portrayed technological progress as inherently virtuous. He managed through enthusiasm rather than strict hierarchy, motivating others with his confidence and charm. However, his relentless optimism sometimes blinded him to the political and ethical implications of his work. Lawrence preferred to see the project as an engineering challenge rather than a moral dilemma.

While friendly and approachable, he could be intolerant of pessimism or doubt, often clashing with more cautious or ethically minded colleagues.

Alliances and Rivalries

Allies: General Leslie R. Groves (shared belief in practical efficiency and urgency), Enrico Fermi (mutual respect, though differing philosophies), along with Vannevar Bush and James Conant (trusted administrators and scientific advisors).

Rivalries: J. Robert Oppenheimer, due to differing leadership styles and occasional competition for resources, and Niels Bohr, who criticized Lawrence’s disregard for the broader moral implications of nuclear weapons.

Neutral Relations: Generally well-liked by engineers and military officials, though less so by idealistic scientists.

Ethical or Political Stance

Lawrence was a firm believer in using science as a tool for victory and progress. He saw the atomic bomb as both a necessary wartime measure and a symbol of American ingenuity.

He avoided philosophical discussions about ethics, focusing instead on practical results and national duty. Politically, Lawrence supported close cooperation between science, government, and industry, a stance that positioned him as one of the key advocates for post-war nuclear energy development under U.S. control.

He later expressed mild regret about the bomb’s devastation but remained convinced that it had shortened the war and saved lives.

Powers and Authority

As Director of the Radiation Laboratory and leader of the electromagnetic separation program, Lawrence commands extensive scientific and industrial authority:

- Controls uranium enrichment research and production via the Y-12 facility at Oak Ridge.
- Oversees all calutron and electromagnetic equipment, and can direct their output.
- Can approve or halt large-scale engineering projects tied to isotope separation.
- Influences industrial and academic partnerships with the MED.
- Requests funding, resources, or manpower from the War Department via the Chair.
- May initiate private collaboration between military and civilian labs.
- Holds access to classified enrichment data and reactor test results.
- Reallocate resources between research labs and industrial facilities.
- Negotiate industrial contracts or equipment production with private companies.
- Propose or fund experimental research into advanced cyclotron technology.
- Conceal inefficiencies or equipment failures to protect project reputation.
- Undermine rival divisions by diverting resources or scientific personnel.

Lawrence’s power lies in industrial and scientific leverage, his ability to control the flow of enriched uranium and shape the technological heart of the Manhattan Project. Delegates who play him can choose between being the project’s driving engineer or a dangerously ambitious innovator whose optimism outpaces ethical restraint.

Dr. Arthur H. Compton

Director, Metallurgical Laboratory, University of Chicago / Head of Plutonium Research Division

Background and Expertise

Arthur Holly Compton was an accomplished American physicist and Nobel laureate, best known for discovering the Compton Effect, the scattering of X-rays by electrons, which confirmed the particle nature of electromagnetic radiation. Educated at Princeton and Cambridge, Compton was a central figure in early 20th-century physics, renowned for his work in quantum theory and cosmic rays.

By the outbreak of World War II, Compton had transitioned from theoretical research to scientific administration, becoming one of the most trusted leaders in the U.S. scientific establishment. His exceptional organizational skill, calm demeanor, and moral introspection made him uniquely suited to oversee the Metallurgical Laboratory in Chicago, the scientific center for plutonium research and nuclear reactor design under the Manhattan Engineer District.

Role in the Manhattan Project

As Director of the Metallurgical Laboratory (Met Lab) at the University of Chicago, Compton oversaw the team that designed and constructed the world's first nuclear reactor, Chicago Pile-1 (CP-1), under Enrico Fermi's leadership in 1942. This milestone demonstrated a controlled, self-sustaining nuclear chain reaction, the foundation of both atomic energy and plutonium-based weapons.

Compton's leadership extended beyond pure science. He coordinated the flow of information between the university's scientists, the Army Corps of Engineers, and other major sites like Hanford and Los Alamos. His Met Lab served as the primary center for plutonium research, reactor safety studies, and theoretical modeling of bomb efficiency.

As one of the most ethically conscious figures in the project, Compton also organized internal discussions about the bomb's potential use and postwar implications, balancing scientific achievement with humanitarian concern.

Personality Traits and Leadership Style

Compton was intellectual, principled, and composed, known for his calm authority and deep sense of moral responsibility. Unlike more authoritarian figures such as Groves or Nichols, Compton led through consensus and persuasion, emphasizing collaboration and trust among his scientists.

He was often regarded as the project's moral compass, pragmatic yet deeply reflective about the social and ethical implications of atomic energy. His faith and humanitarian worldview frequently informed his approach, leading him to question, though never openly obstruct, the bomb's intended wartime use.

Compton’s style was diplomatic and patient, favoring careful decision-making over rash efficiency. This made him an excellent mediator between clashing military and scientific factions.

Alliances and Rivalries

Allies: Enrico Fermi (close collaborator at the Met Lab), Vannevar Bush and James Conant (shared administrative and ethical alignment), and J. Robert Oppenheimer (mutual respect for scientific leadership).

Rivalries: General Leslie R. Groves and Colonel Nichols (occasional tension over secrecy and military control), Ernest Lawrence (contrasting approaches, Compton was cautious and moral, Lawrence aggressive and pragmatic).

Neutral Relations: Maintained cordial but professional ties with most project members, earning respect across both military and scientific lines.

Ethical or Political Stance

Compton firmly believed that atomic research should serve peace as well as war. He saw the bomb as a tragic necessity to end the global conflict but also feared the long-term moral consequences of its use.

He supported continuing development to ensure U.S. security but urged postwar international oversight and transparency in nuclear policy. Compton’s emphasis on responsibility and restraint positioned him as one of the few advocates for ethical consideration during the Manhattan Project’s most secretive years.

Politically moderate, he favored civilian control of atomic energy and later worked toward peaceful applications of nuclear power.

Powers and Authority

As Director of the Metallurgical Laboratory and leader of plutonium research, Compton holds significant scientific and administrative influence:

- Oversees plutonium production research and reactor design.
- Can authorize or suspend nuclear experiments, reactor tests, and theoretical studies.
- Controls internal documentation and reports between scientific divisions and the military.
- May influence the flow of data to Hanford and Los Alamos.
- Holds the ability to convene scientific councils or advisory boards.
- Initiate or accelerate reactor experiments or plutonium refinement projects
- Organize ethical committees or propose moral oversight of the bomb project.
- Withhold research data for verification or moral review.
- Leak partial scientific information to press or political figures under moral justification.
- Establish collaboration between the Met Lab and other research sites.
- Secretly delay production or sabotage unsafe reactor experiments to prevent disaster.

Compton’s power lies in intellectual influence and ethical leverage, he can steer scientific policy, mediate between factions, or challenge the morality of the bomb’s creation. Delegates can play him as either the project’s conscience or its reluctant enabler, shaping whether science serves destruction or humanity.

Dr. Edward Teller

Theoretical Physicist, Los Alamos Laboratory / Head of Theoretical Division for Thermonuclear Research

Background and Expertise

Edward Teller, often called the *"father of the hydrogen bomb,"* was a Hungarian-American theoretical physicist whose brilliance and intensity made him one of the most polarizing figures of the Manhattan Project. Educated in Budapest, Karlsruhe, Leipzig, and Göttingen, Teller studied under some of Europe's greatest physicists, including Werner Heisenberg and Niels Bohr, before emigrating to the United States in 1935 to escape rising fascism.

Before joining the Manhattan Project, Teller was already known for his pioneering work in quantum mechanics, molecular physics, and nuclear theory. His sharp intellect and imaginative thinking made him an indispensable asset in exploring the theoretical limits of atomic energy, though his ambitions often extended far beyond his peers'.

Role in the Manhattan Project

At Los Alamos, Teller initially worked under J. Robert Oppenheimer as part of the theoretical physics group, where he contributed to calculations of nuclear reactions, bomb yield, and implosion dynamics. However, Teller quickly became preoccupied with the idea of a "Super" hydrogen bomb, a thermonuclear weapon far more powerful than the planned atomic bombs.

His persistent lobbying for attention to the "Super" design led to tension within the team, as many scientists, including Oppenheimer and Fermi, viewed it as a distraction from the urgent task of completing the fission bomb. Nonetheless, Teller's theoretical insights contributed to understanding neutron behavior, blast dynamics, and radiation effects, all essential to refining the bomb's design.

By 1944–45, Teller's independent theorizing had earned him both admiration and distrust, cementing his reputation as a visionary genius and a divisive presence within the Manhattan Project.

Personality Traits and Leadership Style

Teller was brilliant, argumentative, and deeply ambitious, driven by an almost obsessive fascination with scientific power. He thrived on intellectual challenge but often clashed with authority figures, refusing to accept limitations on his ideas.

Emotionally intense and outspoken, he was quick to express disagreement, sometimes alienating colleagues with his impatience and competitive nature. Teller's brilliance was matched by an unsettling moral detachment, he was more concerned with *what could be done* than *whether it should be done.*

However, his creativity and theoretical depth made him a constant source of innovation, even if his lack of discipline sometimes frustrated team leaders. Teller saw science as a weapon, not only of war, but of human mastery over nature.

Alliances and Rivalries

Allies: General Leslie R. Groves (shared belief in pursuing ultimate military superiority), Ernest Lawrence (both favored technological expansion and government-backed research), and some younger scientists inspired by his ambition and theoretical boldness.

Rivalries: J. Robert Oppenheimer (philosophical and personal conflict; Oppenheimer's restraint versus Teller's zeal), Enrico Fermi (frequent disputes over practicality and ethical caution), and Niels Bohr (deep ideological differences over scientific responsibility).

Neutral Relations: Maintained an neutral working relationship with administrative figures like Nichols and Bush, who saw him as unpredictable but valuable.

Ethical or Political Stance

Teller firmly believed that scientific discovery was morally neutral, and that it was the duty of scientists to advance knowledge regardless of consequences. He viewed the atomic bomb not as an ethical dilemma, but as a natural step in human progress and national defense.

Politically, Teller was an anti-communist and strong supporter of American military dominance. He advocated for continued weapons research even after Germany's defeat, arguing that the U.S. must stay ahead of any future threats.

His detachment from moral debates and preference for absolute deterrence later defined his postwar career, including his role in developing the hydrogen bomb and testifying against Oppenheimer during the McCarthy era.

Powers and Authority

As a senior theoretical physicist at Los Alamos, Teller commands substantial scientific and intellectual influence:

- Leads the theoretical division on thermonuclear (hydrogen bomb) research.
- Holds access to classified design calculations and reactor data.
- Can persuade or recruit younger scientists to his private projects.
- May attempt to divert computational or experimental resources from fission to thermonuclear work.
- Holds limited authority in resource allocation but immense power in shaping research direction through persuasion.
- Can directly communicate theoretical breakthroughs or warnings to Oppenheimer and Groves.
- Launch or expand theoretical studies into thermonuclear reactions ("Super" bomb).

- Persuade or secretly recruit scientists to assist in side projects outside the MED’s official scope.
- Leak or exaggerate findings to influence project priorities and gain funding.
- Conduct unauthorized calculations or experiments, risking instability or exposure.
- Push for increased militarization and continuation of nuclear weapons research beyond Germany’s defeat.

Teller’s power lies in intellectual disruption, he can reshape the project’s focus, sow division among scientists, or accelerate nuclear escalation. Delegates can play him as either a visionary genius leading humanity into a new scientific age, or a dangerously unrestrained mind willing to burn the world in pursuit of knowledge.

Dr. Hans A. Bethe

Head of Theoretical Division, Los Alamos Laboratory / Senior Nuclear Physicist

Background and Expertise

Hans Albrecht Bethe was a German-born theoretical physicist and one of the foremost scientific minds of the 20th century. Educated at the universities of Frankfurt and Munich under Arnold Sommerfeld, Bethe was an expert in nuclear physics, quantum mechanics, and astrophysics. After fleeing Nazi Germany in 1933, he settled in the United States, where he joined Cornell University and became a central figure in the American scientific community.

Before the Manhattan Project, Bethe was already renowned for his groundbreaking work on nuclear reactions in stars, explaining how stellar energy is produced, research that would later earn him the 1967 Nobel Prize in Physics. His mastery of both theory and application made him an indispensable figure in the development of the atomic bomb.

Role in the Manhattan Project

At Los Alamos, Bethe was appointed by J. Robert Oppenheimer as Head of the Theoretical Division, placing him in charge of all theoretical calculations crucial to the bomb's design. His team analyzed the physics of fission, blast effects, critical mass, neutron diffusion, and weapon yield, ensuring the bomb would function as predicted.

Bethe's leadership transformed Los Alamos' theoretical division into one of the most efficient scientific teams in the entire Manhattan Project. He maintained strict focus on the immediate goal — producing a reliable fission weapon, while discouraging distractions like Edward Teller's pursuit of a "Super" hydrogen bomb.

Bethe's disciplined calculations were pivotal to both the "Fat Man" (plutonium implosion bomb) and "Little Boy" (uranium gun-type bomb) designs, ensuring their success in 1945.

Personality Traits and Leadership Style

Bethe was analytical, calm, and principled, known for his balanced temperament and methodical reasoning. Unlike the more volatile Teller or the philosophical Oppenheimer, Bethe approached every challenge through rational calculation and patience.

He combined intellectual rigor with humility, fostering collaboration and respect among his colleagues. Bethe was also known for his sense of humor and humanity, rare traits in the high-pressure environment of Los Alamos.

However, his stubborn insistence on practicality occasionally brought him into conflict with those pursuing more speculative or political agendas. Bethe valued truth, efficiency, and focus above ambition or ideology.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (trusted scientific partner and intellectual equal), Enrico Fermi (shared admiration for experimental rigor and theoretical precision), Arthur Compton and James Conant (aligned in scientific responsibility and caution).

Rivalries: Edward Teller (constant professional tension; Bethe opposed Teller's obsession with the hydrogen bomb), and General Leslie Groves (occasional clashes over secrecy and the pace of military demands).

Neutral Relations: Maintained professional cooperation with most military figures and administrators, earning their respect through competence and results.

Ethical or Political Stance

Bethe viewed the atomic bomb as a necessary wartime weapon but one that demanded postwar restraint and moral responsibility. He saw the bomb as a tragic yet unavoidable step to end World War II, not as a symbol of power.

Politically, Bethe leaned toward international cooperation and scientific transparency, believing that nuclear research should eventually serve peaceful purposes. After the war, he became an outspoken advocate for arms control and disarmament, warning against nuclear proliferation.

Ethically, Bethe was one of the few scientists at Los Alamos who foresaw the long-term dangers of the nuclear arms race, a concern that deeply influenced his later life.

Powers and Authority

As Head of the Theoretical Division, Bethe wields considerable intellectual and operational influence within Los Alamos:

- Directs all theoretical research related to bomb physics, detonation, and efficiency.
- Oversees scientific teams conducting mathematical modeling and data verification.
- Can approve, modify, or reject theoretical proposals (including Teller's "Super" project).
- Has authority to communicate findings directly to the MED command.
- Controls access to classified physics reports and calculation data.
- May influence testing methods and bomb assembly parameters.
- Can advocate for scientific caution, resource reallocation, or ethical oversight in experimentation.
- Conduct private research on long-term safety or radiation containment.
- Leak or share theoretical results to ensure oversight or collaboration.
- Mediate conflicts among scientists through scientific rationale or compromise.
- Secretly delay experiments that risk failure or ethical catastrophe.

Bethe’s power lies in scientific authority and intellectual integrity, he represents the rational heart of the Manhattan Project. Delegates can play him as the voice of reason striving to maintain scientific order amid chaos, or as a cautious manipulator using logic and reputation to quietly shape the fate of the bomb. and the world it would soon change forever.

Dr. Leo Szilard

Theoretical Physicist / Visionary / Advocate for Scientific Ethics

Background and Expertise

Leo Szilard was a Hungarian-born physicist and inventor whose visionary ideas and restless intellect played a crucial role in initiating the atomic age. A polymath by nature, Szilard was educated in Budapest and Berlin, studying under Max Planck and Albert Einstein before fleeing Nazi Germany in 1933 due to his Jewish heritage.

Szilard's genius lay not in conventional laboratory work but in his ability to foresee scientific possibilities years before others. In 1933, he conceived the idea of a nuclear chain reaction, the fundamental principle that would make atomic energy, and by extension atomic bombs, possible.

It was Szilard who, in 1939, co-drafted the famous Einstein–Szilard letter urging President Roosevelt to begin U.S. research into nuclear fission before Nazi Germany could develop similar weapons. This letter directly led to the establishment of what became the Manhattan Project.

Although he was instrumental in setting the project in motion, Szilard remained deeply conflicted about its purpose and eventual use.

Role in the Manhattan Project

While Szilard was not part of Los Alamos' central weapons design team, he worked closely with Enrico Fermi at the Metallurgical Laboratory (Met Lab) in Chicago, focusing on nuclear reactor development and plutonium production. His collaboration was vital to achieving the first self-sustaining nuclear chain reaction in December 1942, a milestone in nuclear physics.

However, Szilard's outspoken personality and ethical concerns often placed him at odds with military leadership and fellow scientists. He opposed the bomb's use on Japan without warning and advocated for demonstrating its power to force surrender instead.

By 1945, he led a petition signed by dozens of Manhattan scientists urging President Truman to reconsider the bomb's deployment on civilian populations.

Personality Traits and Leadership Style

Szilard was brilliant, unpredictable, and morally driven, a scientist whose imagination outpaced the institutions around him. His mind constantly generated new ideas, inventions, and warnings, but his rebellious independence often frustrated colleagues who valued order and discipline.

He distrusted bureaucracies and military secrecy, preferring open scientific discourse. While often described as eccentric, Szilard possessed remarkable foresight, anticipating both the potential and the peril of nuclear weapons long before anyone else.

Unlike many scientists at Los Alamos who saw themselves as engineers of war, Szilard saw himself as a guardian of humanity's conscience, trying to control the destructive path he helped set in motion.

Alliances and Rivalries

Allies: Albert Einstein (shared moral vision and early advocacy for nuclear research), Enrico Fermi (longtime collaborator, though their temperaments differed), and James Franck and other Met Lab scientists who opposed the bomb's immediate use.

Rivalries: General Leslie Groves (mutual distrust; Groves saw Szilard as a security threat), Ernest Lawrence and Edward Teller (disagreed over militarization of science) and Oppenheimer (respected him intellectually but found him difficult to control).

Neutral Relations: Maintained uneasy cooperation with most scientists; respected for intellect but viewed as politically troublesome.

Ethical or Political Stance

Szilard's defining trait was his deep ethical opposition to unrestrained nuclear warfare. He believed scientists bore moral responsibility for how their discoveries were used.

Politically, he leaned toward international cooperation and civilian control of nuclear technology, advocating early for arms control and postwar diplomacy. He distrusted military authority and sought to ensure that science remained a force for peace, not domination.

His activism foreshadowed the nuclear disarmament movements of the Cold War, making him one of the first scientists to publicly confront the moral consequences of atomic research.

Powers and Authority

Szilard's power lies in his influence, intellect, and moral leverage, rather than in formal rank. Within the committee or crisis:

- Can propose or block specific scientific or ethical directives related to nuclear research.
- Can rally other scientists toward collective petitions, protests, or moral actions.
- Has access to nuclear reactor and plutonium data from the Met Lab.
- Has theoretical knowledge that could slow, redirect, or sabotage certain research paths.
- Leak scientific data to civilian advisors or foreign governments.
- Attempt direct communication with figures like Einstein or Roosevelt for mediation.

Szilard is a wild card, a man who started the atomic age but seeks to restrain it. Delegates can play him as a courageous moral visionary trying to save humanity from itself, or as a subversive scientist undermining the project from within.

Dr. Niels Bohr

Theoretical Physicist / Scientific Philosopher / Advocate of International Cooperation

Background and Expertise

Niels Henrik David Bohr was a Danish theoretical physicist and one of the most influential scientific minds of the 20th century. Born in Copenhagen, Bohr made groundbreaking contributions to atomic structure and quantum mechanics, earning the 1922 Nobel Prize in Physics for his model of the atom.

Before the war, Bohr's Institute for Theoretical Physics in Copenhagen served as a global hub for young physicists, including Heisenberg, Pauli, and Oppenheimer, who would later shape the nuclear age. His reputation as both a scientific leader and a mentor made him one of the most respected figures in modern physics.

After escaping Nazi-occupied Denmark in 1943, Bohr fled to Britain and later joined the Manhattan Project as an advisor under the pseudonym "Nicholas Baker" to maintain secrecy. His deep understanding of nuclear fission and his philosophical outlook made him a unique voice in the project, one more concerned with the implications of discovery than with its immediate wartime application.

Role in the Manhattan Project

Bohr served as a senior consultant at Los Alamos, where he provided theoretical insights into nuclear fission, chain reactions, and bomb design, though his role was largely advisory. His primary contribution, however, lay in shaping the moral and political discourse within the scientific community.

He frequently engaged Oppenheimer, Fermi, and Teller in discussions about international control of atomic weapons and warned that secrecy and nationalism would lead to a postwar arms race. Bohr believed that transparency and cooperation among nations were essential to prevent nuclear catastrophe.

Despite his brilliance, Bohr's idealism often clashed with the project's militarized structure. His advocacy for sharing nuclear information with the Soviet Union and allies alarmed figures like General Groves, who viewed him as a potential security risk.

Personality Traits and Leadership Style

Bohr was humble, reflective, and profoundly philosophical. He spoke slowly and thoughtfully, often framing scientific problems as questions of moral and existential importance. His colleagues affectionately called him "The Philosopher," as his leadership came not from authority but from intellectual and moral gravitas.

He was collaborative rather than confrontational, preferring dialogue over debate. Though not an administrator, Bohr had an almost mentor-like influence on younger physicists, guiding their thinking beyond technical work toward questions of responsibility and purpose.

He was also known for his gentle stubbornness, a refusal to compromise on his principles of openness, truth, and shared knowledge, even in the face of military pressure.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (respected his wisdom and sought his counsel), Leo Szilard (shared moral opposition to secretive weaponization), James Franck, Eugene Wigner, and other European émigré scientists sympathetic to ethical concerns.

Rivalries: General Leslie Groves (clashed over Bohr's openness and political naivety), Ernest Lawrence (saw Bohr's philosophical caution as unproductive during wartime), Edward Teller (respected Bohr's intellect but dismissed his moral idealism).

Neutral Relations: Generally well-liked, though often regarded as "too idealistic" by practical engineers and military officers.

Ethical or Political Stance

Bohr was a moral internationalist who believed scientific knowledge should unite humanity, not divide it. He viewed the atomic bomb as both a triumph and a tragedy, a discovery that could either destroy civilization or ensure peace through shared understanding.

He advocated for "open world" diplomacy, encouraging the United States and Soviet Union to exchange information to build trust and prevent a future arms race. Bohr feared that postwar secrecy would doom the world to endless nuclear escalation.

Politically, he supported civilian control over atomic research and opposed exclusive military ownership of nuclear technology. His stance placed him at odds with American officials who viewed secrecy as essential to national security.

Powers and Authority

While Bohr held no formal command within the Manhattan Project, his influence was intellectual, moral, and advisory. In committee simulation, his powers include:

- Influencing the morale and conscience of the scientific community.
- Access to European scientific networks and confidential discussions with Allied governments.
- May attempt to communicate with foreign leaders or advisors.
- Can mediate disputes between militarists and idealists within the committee.
- Holds philosophical and scientific sway that can shape the tone of directives and resolutions.

- Advocate for international scientific collaboration and atomic transparency.
- Secretly send messages or proposals to Allied leaders promoting peaceful control of nuclear technology.

Bohr represents the moral and philosophical center of the Manhattan Project. While others raced to end the war, he pondered how humanity would live with what it had created. Delegates embodying Bohr must balance wisdom with danger’s a man walking the fine line between philosopher and perceived traitor, struggling to turn destruction into understanding.

Crawford H. Greenewalt

Chemical Engineer & DuPont Industrial Liaison to the Manhattan Engineer District (Hanford Site)

Background and Expertise

Crawford Hallock Greenewalt was a chemical engineer and senior executive at the DuPont Company, one of the primary industrial partners of the Manhattan Project. Educated at the Massachusetts Institute of Technology (MIT), Greenewalt specialized in chemical processes, large-scale reactor engineering, and industrial management.

By the early 1940s, he had established himself as one of DuPont's top technical minds, skilled in translating scientific theory into industrial reality. When the U.S. Army Corps of Engineers sought corporate partners capable of managing the unprecedented complexity of plutonium production, DuPont recommended Greenewalt as their lead representative.

His pragmatic engineering expertise and ability to coordinate between scientists and corporate management made him essential in scaling up theoretical nuclear physics into functional, production-ready systems.

Role in the Manhattan Project

Greenewalt served as DuPont's chief technical liaison to the Hanford Engineer Works in Washington State, the massive industrial site responsible for producing plutonium for the atomic bomb. Working closely with General Leslie Groves, Colonel Franklin Matthias, and physicist Enrico Fermi, he oversaw the design, construction, and operation of the world's first large-scale nuclear reactors.

He was instrumental in developing cooling systems, radiation shielding, and chemical separation plants for extracting plutonium from irradiated uranium. Greenewalt's role was not purely technical, he also mediated between the industrial mindset of DuPont and the academic, experimental culture of scientists like Fermi and Oppenheimer.

As a corporate figure, he also managed cost oversight, supply coordination, and worker safety, ensuring DuPont fulfilled its contract without compromising efficiency or security.

Personality Traits and Leadership Style

Greenewalt was analytical, calm, and precise, known for his engineering pragmatism and understated leadership. Unlike some of the more outspoken military officers or flamboyant scientists, he led through competence and quiet authority.

He valued data, discipline, and practicality, often defusing scientific arguments by reducing them to technical solvability. He believed in "getting things done" rather than debating ethics, though he respected moral discussions, his focus remained on feasibility and safety.

His style was collaborative but cautious. He demanded clarity from subordinates and partners alike, expecting problems to be quantified and solutions to be tested, not theorized.

Alliances and Rivalries

Allies: Colonel Franklin T. Matthias (fellow Hanford lead; shared logistical partnership), General Leslie R. Groves (trusted for industrial reliability), Enrico Fermi (collaborated on reactor physics and operational protocols).

Rivalries: Edward Teller and other theoretical physicists, whose speculative ideas conflicted with his practical mindset.

Neutral Relations: Maintained a working relationship with Oppenheimer and Nichols, though his corporate loyalty sometimes made scientists wary of his influence.

Ethical or Political Stance

Greenewalt's stance was industrial-pragmatic, he viewed the Manhattan Project as an engineering challenge to be solved, not a moral debate to be waged. His loyalty was to efficiency, safety, and technical excellence.

He neither glorified the bomb's use nor condemned it. For him, the success of the project represented the pinnacle of human ingenuity under pressure. Politically, he believed in corporate discipline serving national defense, opposing civilian interference or political hesitation during wartime.

However, postwar, Greenewalt would later advocate for nuclear safety and peaceful industrial applications, showing a quiet awareness of the long-term consequences of his work.

Powers and Authority

As DuPont's lead engineer and liaison to Hanford, Greenewalt holds industrial and engineering control powers within the committee:

- Approves or modifies engineering blueprints, reactor designs, and cooling systems.
- Can negotiate corporate contracts and request material support from DuPont or allied industries.
- Can redirect chemical research efforts related to plutonium separation.
- May restrict access to technical data for security or proprietary reasons.
- Has influence over corporate funding and material efficiency, affecting MED's construction timelines.
- Approve or fast-track reactor expansion or new chemical separation plants.
- Coordinate with industrial suppliers for rare materials, reactors, or equipment.
- Conduct internal audits to ensure cost and safety compliance, or to expose mismanagement by rivals.
- Use DuPont's network to acquire black-market materials or industrial intelligence.

Crawford H. Greenewalt embodies the industrial backbone of the Manhattan Project, a bridge between the theoretical genius of the scientists and the logistical machinery of war. His role in the committee represents the power of industry in shaping warfare, capable of enabling progress or halting it through technical and material control.

Percival C. Keith

Chemical Engineer & Vice President of Kellex Corporation; Head of Gaseous Diffusion Program, Manhattan Engineer District (MED)

Background and Expertise

Percival C. Keith was a renowned American chemical engineer and one of the leading figures in wartime industrial innovation. A graduate of Cornell University, Keith co-founded the Kellex Corporation, a subsidiary of the M.W. Kellogg Company, specifically created to develop the gaseous diffusion process for uranium enrichment, a cornerstone of the Manhattan Project.

Before joining the MED, Keith had an extensive background in chemical plant design, process engineering, and industrial-scale gas systems, making him uniquely qualified to handle one of the most complex technological challenges of the war: separating uranium-235 from uranium-238 on an industrial scale.

His technical acumen and corporate leadership made him one of the few civilians capable of managing a project that combined cutting-edge physics with massive engineering logistics.

Role in the Manhattan Project

Keith served as Director of the Gaseous Diffusion Program, headquartered at Oak Ridge, Tennessee, and supervised under the Manhattan Engineer District. His company, Kellex Corporation, was responsible for designing, constructing, and operating the K-25 Plant, which became one of the largest buildings in the world at the time.

The plant's mission was to produce enriched uranium-235 for the "Little Boy" bomb. Keith coordinated thousands of engineers and contractors, oversaw material procurement, and resolved technical crises that threatened to derail progress.

He also worked closely with Colonel Kenneth D. Nichols and General Leslie R. Groves to meet near-impossible deadlines, balancing corporate efficiency with the tight secrecy and urgency demanded by the military.

Keith's efforts were crucial in translating theoretical enrichment methods into viable industrial production, ensuring that the Manhattan Project had the enriched uranium necessary to complete one of its two atomic bombs.

Personality Traits and Leadership Style

Percival Keith was known for his bold, outspoken, and ambitious personality. Unlike the reserved and methodical Crawford Greenewalt, Keith exuded energy and confidence, often pushing teams to achieve the impossible.

He had a hands-on leadership style, personally involving himself in technical and managerial decisions. His sharp intellect and ability to improvise under pressure made him an invaluable asset, but his impatience with bureaucracy sometimes caused friction with military officers and scientists who preferred more cautious methods.

Keith was highly competitive and proud of his team's work, often clashing with rival scientists or companies over efficiency, credit, or resources. His confidence occasionally bordered on arrogance, but his results often justified his assertive approach.

Alliances and Rivalries

Allies: Colonel Kenneth D. Nichols (shared interest in logistics and engineering efficiency), General Leslie R. Groves (respected for his ability to deliver results under pressure), Crawford H. Greenewalt (industrial partner with complementary technical expertise).

Rivalries: J. Robert Oppenheimer and theoretical scientists who criticized industrial involvement or doubted gaseous diffusion's feasibility, Leo Szilard, whose moral opposition to the bomb contrasted with Keith's practical focus, Occasional friction with other contractors competing for funding or recognition.

Neutral Relations: Maintained a professional rapport with physicists like **Enrico Fermi** and **Arthur Compton**, though he viewed their work as theoretical compared to his industrial pragmatism.

Ethical or Political Stance

Keith was unapologetically utilitarian. He viewed the Manhattan Project as a wartime necessity, an engineering problem that demanded solutions, not moral hesitation. His primary goal was to ensure America's technological supremacy and to end the war through decisive innovation.

He had little patience for ethical debates about the bomb's use, believing that moral questions should be settled after victory, not during war. Politically, Keith supported corporate-military cooperation and believed in America's duty to lead through scientific and industrial superiority.

Powers and Authority

As head of the gaseous diffusion program and senior industrial contractor, Keith wields significant engineering, industrial, and logistical authority within the committee:

- Controls uranium enrichment operations at Oak Ridge (K-25 Plant).
- Can allocate or restrict access to enriched uranium for research or weapon assembly.
- Oversees construction projects, technical staff, and plant operations.
- Can approve or halt industrial experiments related to diffusion or isotope separation.
- Possesses corporate influence to negotiate contracts or redirect funding to key suppliers.
- Can coordinate joint industrial initiatives with DuPont, Union Carbide, or military engineering divisions.
- Can secretly redirect resources or personnel for private industrial projects.
- Approve or expand uranium enrichment facilities at Oak Ridge.

- Redirect manpower and materials from less efficient divisions.
- Authorize new reactor cooling or separation experiments to improve yield.
- Collaborate with Greenewalt or Nichols to strengthen industrial coordination.
- Launch internal efficiency drives or audits to expose rivals' inefficiencies.
- Use corporate connections to secure secret external resources or contracts.
- Withhold enriched uranium to leverage power in internal disputes.
- Initiate or conceal private industrial ventures under the guise of "classified research."

Percival C. Keith embodies the industrial muscle of the Manhattan Project, bold, resourceful, and unapologetically results-driven. His power lies in his command over uranium enrichment and his ability to mobilize vast corporate machinery for wartime innovation. In the committee, Keith represents the force of industry as both a creator and a potential manipulator of the atomic age.

Klaus Fuchs

Theoretical Physicist – Los Alamos Laboratory, Manhattan Engineer District (MED)

Background and Expertise

Emil Klaus Julius Fuchs was a German-born theoretical physicist who played a critical role in the Manhattan Project's nuclear design work, and later became one of the most infamous atomic spies of the 20th century.

Born in Germany, Fuchs fled Nazi persecution in the 1930s and settled in Britain, where he earned his Ph.D. in physics under Max Born at the University of Edinburgh. He worked on theoretical nuclear research in Britain before being recruited into the British Mission that joined the U.S. Manhattan Project in 1943.

Fuchs was a brilliant mathematician and physicist, known for his deep understanding of nuclear fission, neutron behavior, and bomb design theory. However, while working on the American atomic project, he also passed classified information to the Soviet Union, driven by his leftist political ideology and belief that no single nation should monopolize atomic power.

Role in the Manhattan Project

Fuchs was assigned to Los Alamos Laboratory, where he worked under Hans Bethe's Theoretical Division on critical problems related to bomb efficiency, implosion design, and neutron diffusion. He contributed vital calculations that improved the yield and reliability of the plutonium bomb ("Fat Man").

His mathematical precision made him a valued member of the theoretical team. Fuchs' work helped clarify how to initiate chain reactions efficiently and how to synchronize explosive lenses for the implosion design, developments central to the bomb's success.

At the same time, Fuchs secretly transmitted technical blueprints, calculations, and design principles to Soviet intelligence through courier systems, effectively giving the USSR a roadmap to its own atomic bomb years later.

Personality Traits and Leadership Style

Fuchs was quiet, disciplined, and intellectually intense. Colleagues described him as polite and reserved, a man of few words but great analytical power. Beneath his calm demeanor, however, was a complex moral conflict: loyalty to his scientific colleagues versus loyalty to his ideological beliefs.

He was meticulous and methodical, preferring precision over charisma. His stoic personality often made him seem detached, yet he worked long hours and rarely made mistakes. While he lacked overt leadership presence, his technical reliability made him a trusted figure among scientists, an irony given his double life.

Fuchs’ calm rationality also allowed him to maintain his façade, keeping his espionage activities hidden even from those closest to him.

Alliances and Rivalries

Allies: Hans Bethe (supervisor, respected his theoretical skill), J. Robert Oppenheimer (respected his intellect and discretion), along with British Mission scientists such as Rudolf Peierls and James Chadwick (shared his background and trust).

Rivalries: Edward Teller, whose obsession with the hydrogen bomb and flamboyant ego clashed with Fuchs’ quiet rationalism, along with military figures like Colonel Nichols and General Groves, who distrusted foreign scientists. He also had Ideological tension with Leo Szilard and Niels Bohr, who debated ethical transparency rather than secrecy, the very issue Fuchs took into his own hands.

Neutral Relations: Maintained professionalism with most Los Alamos scientists, who saw him as dependable though unremarkable in demeanor.

Ethical or Political Stance

Fuchs’ ethical and political stance was deeply ideological. A committed socialist since his youth, he believed that atomic power should not be controlled by one nation, especially not the capitalist West. In his mind, sharing nuclear information with the Soviet Union would preserve global balance and prevent American dominance.

While his espionage is viewed as treachery, Fuchs saw it as moral correction through equality of power. He justified his betrayal as an act of peace through balance, not malice. Nonetheless, his deception endangered lives and national security, making him one of the most morally conflicted figures in the Manhattan Project.

Powers and Authority

Within the committee, Klaus Fuchs wields scientific and covert intelligence power, representing both his contributions and his espionage potential:

- Can initiate or propose theoretical research related to bomb design, neutron behavior, or implosion systems.
- Has access to classified Los Alamos data, including physics models, calculations, and research results.
- Can share, conceal, or falsify scientific data in directives to manipulate project outcomes.
- Can secretly communicate or collaborate with external agents (spies, foreign governments) through coded directives.
- Possesses influence within the scientific hierarchy through trust and discretion.
- Propose or refine theoretical advancements in implosion or chain reaction modeling.
- Secretly leak classified information to a foreign “ally” (to be approved or moderated by the Chair).

- Manipulate data or results to delay rival scientists' progress while appearing cooperative.
- Form quiet alliances with sympathetic scientists under the guise of "scientific transparency."
- Initiate private projects for alternative fission research or safety "tests" that serve ulterior purposes.
- Use espionage to gain intelligence on others' directives or internal investigations.
- Frame or discredit colleagues by subtly exposing inconsistencies or leaks.

Delegates playing Fuchs must navigate a precarious path: leveraging his scientific genius and insider access while concealing his shadow agenda. Whether used for sabotage, espionage, or reform, his portfolio offers one of the most dangerous, and fascinating, positions in the entire MED.

Theodore Hall

Physicist – Los Alamos Laboratory, Manhattan Engineer District (MED)

Background and Expertise

Theodore Alvin Hall was one of the youngest and most enigmatic scientists in the Manhattan Project, a 19-year-old prodigy who graduated from Harvard and was recruited to Los Alamos to work on the plutonium bomb. Despite his age, Hall's brilliance in theoretical and experimental physics earned him a place among the elite tasked with developing the world's first atomic weapons.

Born in 1925 in New York, Hall was a child genius who entered Harvard at sixteen, where his talent for quantum mechanics quickly stood out. In 1944, he was recruited to Los Alamos to assist in plutonium research and bomb design under the direction of Robert Oppenheimer and Hans Bethe.

However, much like Klaus Fuchs, Hall became disillusioned with the secrecy and monopoly of nuclear power. Fearing that the United States would use the bomb for global domination, Hall decided to pass classified information to the Soviet Union, believing it would preserve world balance and prevent unilateral nuclear control.

Role in the Manhattan Project

At Los Alamos, Hall worked primarily on the implosion design for the plutonium bomb ("Fat Man"). His work involved diagnostics and theoretical calculations related to the compression of plutonium cores, crucial for ensuring an efficient nuclear chain reaction.

Though not as senior as Fuchs, Hall had direct access to sensitive details about the bomb's construction, including explosive lens configuration and the structure of the plutonium core. This made him an invaluable asset not just to the U.S. war effort, but also to Soviet intelligence, which he contacted in late 1944 through a courier network in New York.

Hall's espionage went undetected during the war; his identity was only revealed years later through decrypted Venona intercepts.

Personality Traits and Leadership Style

Hall was brilliant, youthful, and idealistic, a combination that made him both daring and naïve. Unlike the stoic and disciplined Fuchs, Hall was openly inquisitive, socially engaged, and emotionally driven.

He viewed his actions not as treachery, but as a moral correction, ensuring no single power could threaten global peace through nuclear supremacy. His political leanings were strongly leftist and humanitarian, but also impulsive and untempered by experience.

Hall's youthful energy and intellect made him popular among peers, though his idealism often clashed with the military's rigid secrecy. He lacked the cautious restraint of senior scientists, which made him unpredictable, both a valuable innovator and a potential risk in the project's hierarchy.

Alliances and Rivalries

Allies: Klaus Fuchs (shared ideological sympathy and parallel espionage motives, though they operated independently), Hans Bethe (valued Hall's scientific potential and saw him as a promising young theorist), and J. Robert Oppenheimer (appreciated his intellect, though unaware of his disloyalty).

Rivalries: Edward Teller (viewed Hall as reckless and immature), Leslie Groves (distrusted young or foreign scientists and would likely suspect Hall's idealism)

Neutral Relations: Generally well-liked among fellow young scientists at Los Alamos; his enthusiasm made him an approachable figure.

Ethical or Political Stance

Theodore Hall's actions stemmed from a deep moral and political conviction rather than greed or coercion. He believed that scientific knowledge belonged to humanity, not governments, and that the Soviet Union deserved access to atomic secrets to prevent global imbalance.

His espionage was driven by idealism over ideology, the belief that fairness and peace could be maintained only if all nations shared the same power. In his mind, he was preventing an American monopoly, not betraying his country.

This moral reasoning, however, revealed his youthful naïveté, underestimating the dangers of nuclear proliferation and the political motives of those he aided.

Powers and Authority

In the committee, Theodore Hall represents the impulsive intelligence and ethical rebellion within the MED. His powers blend scientific insight with political subversion:

- Can initiate or assist experimental research on plutonium implosion, neutron timing, and explosive lens calibration.
- Can propose youth-driven scientific collaborations or radical new methods overlooked by senior scientists.
- Has limited but direct access to bomb schematics, making him valuable in technical discussions.
- Can share data or partial designs with external actors or spies under covert directives.
- Can influence or mislead younger scientists to pursue alternate, riskier research pathways.

- May form alliances with other ideologically motivated members to push for “scientific transparency.”
- Has the ability to smuggle microfilm, blueprints, or data fragments through private directives.

Theodore Hall represents youthful genius in moral conflict, a prodigy torn between scientific discovery and ethical conscience. In the committee, he symbolizes the tension between progress and responsibility, secrecy and justice.

David Greenglass

Machinist and Technician – Los Alamos Laboratory, Manhattan Engineer District (MED)

Background and Expertise

David Greenglass was an Army sergeant and machinist assigned to the Los Alamos Laboratory during the Manhattan Project. Born in New York City in 1922, Greenglass was not a scientist by training but a skilled mechanical technician who played a key role in assembling bomb components, machining uranium and plutonium parts, and supporting experimental setups.

He attended Haaren High School and studied mechanical engineering briefly before being drafted into the U.S. Army in 1943. Due to his technical aptitude, he was sent to Los Alamos, where he worked under the supervision of senior physicists and engineers to fabricate precision parts for the bomb assembly process, particularly for the implosion-type plutonium weapon ("Fat Man").

However, Greenglass's legacy is defined not by his contributions to the project, but by his later espionage for the Soviet Union, driven partly by ideology and partly by family ties through his sister Ethel Rosenberg and brother-in-law Julius Rosenberg, who recruited him as a spy.

Role in the Manhattan Project

At Los Alamos, Greenglass's duties involved machining and assembly of bomb components, operating lathes and precision tools essential for shaping and preparing plutonium and uranium parts. While he was far from the theoretical core of the project, his position gave him access to sensitive technical data and component blueprints.

In 1944, Greenglass began transmitting information to the Soviet Union through his brother-in-law Julius Rosenberg. The data he provided included hand-drawn sketches and descriptions of the implosion mechanism, as well as materials and design specifics. Although the intelligence was not always precise, it significantly aided the Soviet atomic program.

After the war, Greenglass was arrested and became a key witness in the Rosenberg espionage trial, testifying against his own sister and brother-in-law to reduce his sentence.

Personality Traits and Leadership Style

David Greenglass was practical, opportunistic, and morally conflicted. Unlike intellectual spies such as Fuchs or Hall, his motivations were more personal than ideological, he valued family loyalty and material gain over abstract political ideals.

He was not a leader in the scientific community, but rather a skilled technician who worked diligently and followed orders. His lack of scientific background made him less cautious about the ethical magnitude of his espionage, to him, it was simply sharing blueprints and mechanical details, not state secrets.

Greenglass was quiet, observant, and compliant in his professional role, but outside of work, he could be gullible and easily influenced. His espionage was largely driven by persuasion rather than conviction.

Alliances and Rivalries

Allies: Julius and Ethel Rosenber (family members and espionage recruiters), Klaus Fuchs and Theodore Hall (indirectly//though he never interacted with them, their parallel activities aligned ideologically), Fellow machinists and technicians (often cooperative and team-oriented within Los Alamos operations).

Rivalries: Military superiors and security officers, Higher-ranking scientists (especially those who saw him as a lower-level worker, often excluded from theoretical discussions), along with Colonel Nichols and General Groves (who would enforce strict oversight on personnel like him).

Neutral Relations: Generally maintained anonymity within the Los Alamos hierarchy; few people paid close attention to him, which aided his covert actions.

Ethical or Political Stance

Greenglass's political stance was ambiguous and inconsistent. He was sympathetic to left-wing ideals through his family's influence but lacked ideological depth. His espionage was not a principled act of global balance (like Hall's) but rather a mix of personal loyalty, persuasion, and pragmatism.

He rationalized his actions by believing the Soviets were America's allies during the war and thus deserved access to the same scientific breakthroughs. His later betrayal of the Rosenbergs during his trial exposed his moral flexibility, willing to sacrifice family to protect himself.

In committee terms, he represents moral compromise under pressure, the everyman caught between duty, loyalty, and survival.

Powers and Authority

While not a major figure in the hierarchy, Greenglass's technical position and relative invisibility give him unique covert powers within the committee:

- Can assist in bomb assembly and mechanical design tasks, and so can fabricate or modify key bomb parts, influencing experimental outcomes.
- Has direct access to component schematics, tool records, and assembly plans.
- Can forge or smuggle mechanical drawings, data fragments, or materials under the guise of maintenance.
- Can leak minor but valuable technical information through private directives.
- May assist or hinder engineers by sabotaging or misassembling components subtly.
- Can build alliances with other lower-ranked personnel to carry out covert tasks unnoticed.

- Can request supplies, tools, or parts for “maintenance,” masking ulterior motives.
- Pass classified blueprints or sketches to external contacts under espionage operations.

David Greenglass embodies the ordinary man entangled in extraordinary deceit, a figure who lacks ideological clarity but whose minor actions ripple across history. In the committee, he represents the dangers of loyalty misplaced, of technical workers caught in moral gray zones.

Isidor Isaac Rabi

Consulting Physicist – Manhattan Engineer District (Los Alamos and Columbia University)

Background and Expertise

Isidor Isaac Rabi was an Austrian-born American physicist, renowned for his pioneering work in atomic and nuclear physics. Born in 1898 in Galicia (then part of Austria-Hungary), Rabi immigrated to the United States as a child and later earned his Ph.D. in physics from Columbia University in 1927, where he became a leading figure in molecular beam magnetic resonance, a technique that would later earn him the 1944 Nobel Prize in Physics.

By the early 1940s, Rabi was one of the most respected experimental physicists in America and a key organizer in mobilizing the U.S. scientific community for wartime research. Though he was not continuously stationed at Los Alamos, Rabi served as a consultant and scientific advisor, providing critical input on instrumentation, bomb design measurements, and radar applications. His strong academic connections also made him an essential link between Columbia University's research division and the Manhattan Project.

Rabi's brilliance lay not only in experimental physics but in his ability to translate abstract theory into precise measurement systems, a skill indispensable for the bomb's final testing and detonation phases.

Role in the Manhattan Project

Rabi's role in the Manhattan Project was that of a senior consultant and scientific troubleshooter. He worked closely with J. Robert Oppenheimer and Enrico Fermi, offering expertise on theoretical guidance, experimental instrumentation, and diagnostic systems used to measure the explosion dynamics of the atomic bomb.

During the Trinity Test preparations, Rabi's magnetic resonance and radar expertise proved vital in calibrating instruments that tracked blast pressure and yield. His presence in Los Alamos in 1944–45 marked a turning point, he helped streamline collaboration between different scientific teams and often mediated disputes between theoretical and experimental physicists.

Although he supported the development of the bomb to end the war, Rabi was one of the few senior scientists to question the morality and long-term consequences of nuclear weapons, later urging post-war restraint and international control.

Personality Traits and Leadership Style

Isidor Rabi was witty, outspoken, and intellectually sharp, known for his skeptical yet humorous demeanor. He had little tolerance for inefficiency or authoritarianism, which sometimes brought him into mild conflict with military officers.

Rabi's leadership style was collegial rather than commanding, he inspired others through intellectual clarity and debate rather than rank or force. He was deeply respected by his peers for his scientific honesty and his ability to mediate between rival factions of scientists. His frankness made him both an asset and a challenge to military management, as he was not afraid to criticize decisions that undermined scientific integrity.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (Shared intellectual respect and collaboration on scientific design and testing), Enrico Fermi and Hans Bethe (Collaborated closely in the Los Alamos theoretical division.), along with Arthur Compton and Ernest Lawrence (Maintained strong professional ties from Columbia and the National Defense Research Committee).

Rivalries: Military figures such as Colonel Nichols and General Groves who found his independent spirit frustrating and his skepticism toward military secrecy unhelpful.

Neutral Relations: Maintained professionalism with most scientific staff, often acting as a bridge between civilian scientists and military overseers.

Ethical or Political Stance

Rabi's stance on nuclear weapons was deeply moral and cautious. Though he believed the development of the atomic bomb was necessary to end World War II, he opposed its post-war militarization and later became a vocal advocate for international control of atomic energy.

He often urged colleagues to consider the ethical consequences of scientific discovery, warning that the bomb's creation marked the beginning of an uncontrollable arms race. Rabi's outlook placed him among the moral conscience of the Manhattan Project, a scientist who sought to balance duty with humanity.

Powers and Authority

As a senior consulting physicist, Rabi wields influence through scientific credibility and measurement expertise, though he lacks formal administrative power. He can:

- Propose or advise on new scientific or diagnostic research projects.
- Influence testing procedures, data validation, and bomb measurement systems.
- Mediate disputes between theoretical and experimental scientists.
- Expose errors or inefficiencies in ongoing research, improving or undermining specific teams.
- Influence morale and direction through public debate and expert persuasion.

Isidor Isaac Rabi represents the rational conscience of the Manhattan Project, a scientist driven by discovery, yet wary of its destructive potential. His portfolio balances intellectual power with moral restraint, making him a crucial moderating force within the committee.

James B. Conant

Chairman, National Defense Research Committee (NDRC); Member, Interim Committee on Atomic Energy

Background and Expertise

James Bryant Conant was an American chemist, educator, and statesman, widely recognized for his pivotal role in shaping U.S. scientific policy during World War II. Born in 1893, Conant earned his Ph.D. in chemistry from Harvard University and became one of the nation's foremost experts in physical and organic chemistry, conducting groundbreaking research on chemical equilibria and oxidation.

Before the war, Conant served as President of Harvard University (1933–1953), where he transformed the institution into a center for modern scientific research. With the outbreak of World War II, he was appointed Chairman of the National Defense Research Committee (NDRC) in 1941, later merging into the Office of Scientific Research and Development (OSRD) under Vannevar Bush.

Conant's administrative brilliance and scientific credibility positioned him as a central figure in coordinating America's vast network of wartime research, linking the academic community, industrial laboratories, and military leadership. He served as a key scientific advisor to President Franklin D. Roosevelt and, later, Harry S. Truman, shaping national policy on atomic energy and post-war nuclear strategy.

Role in the Manhattan Project

Within the Manhattan Project, Conant acted as a senior overseer and policy strategist, ensuring that the project maintained both scientific rigor and political accountability. He supervised scientific coordination between the OSRD and the Manhattan Engineer District, working closely with General Leslie Groves and J. Robert Oppenheimer to evaluate research progress and resource allocation.

Conant's most crucial wartime contributions included:

- Approving key scientific appointments and ensuring efficient collaboration across laboratories.
- Advising on the selection of test sites and bomb design progress.
- Serving as the civilian liaison between the military command and the scientific establishment.
- Later, as part of the Interim Committee on Atomic Energy, he helped shape policy on how and when to deploy the bomb, and the broader post-war management of nuclear technology.

Conant's ability to merge scientific insight with policy vision made him one of the most powerful civilian figures in the atomic program.

Personality Traits and Leadership Style

Conant was intellectual, pragmatic, and disciplined, known for his strategic thinking and quiet authority. Unlike more emotional figures such as Oppenheimer or Szilard, Conant operated through calm deliberation and bureaucratic precision.

He believed that science should serve national interests and was deeply committed to centralized control and secrecy during wartime operations. His leadership style emphasized coordination, hierarchy, and trust in expert systems, often preferring to act as a behind-the-scenes policymaker rather than a public figure.

He had little patience for disorganization or moral grandstanding, often clashing subtly with idealists who questioned the bomb’s morality. Conant viewed such debates as secondary to victory and post-war stability.

Alliances and Rivalries

Allies: Vannevar Bush (His closest collaborator in science administration; together they organized the entire U.S. wartime research effort), Leslie R. Groves (Shared a mutual respect for efficiency and authority, despite occasional tension over secrecy) and J. Robert Oppenheimer (Admired Oppenheimer’s intellect and leadership but sometimes doubted his political reliability).

Rivalries: Leo Szilard and Niels Bohr (Considered them overly idealistic and disruptive to wartime discipline), along with Edward Teller (Viewed his hydrogen bomb advocacy as premature and ethically reckless).

Neutral Relations: Maintained courteous, professional relations with most military officers and scientists, preferring mediation over confrontation.

Ethical or Political Stance

Conant believed in scientific responsibility to the state. He supported the bomb’s development and use as a necessary military measure, though he later emphasized the need for international regulation and civilian oversight of atomic energy.

He rejected the idea that scientists alone should determine the moral implications of their work, instead insisting that such decisions rested with elected leaders and policymakers.

Post-war, Conant became one of the architects of the U.S. Atomic Energy Commission, advocating for a balance between national security and peaceful scientific progress. In committee, he embodies rational authority and the ethical pragmatist, believing in controlled power rather than moral idealism.

Powers and Authority

As Chairman of the NDRC and a senior policy advisor, Conant holds immense strategic and administrative power within the committee:

- Can approve or deny large-scale research initiatives and scientific appointments.
- Can redirect funding toward or away from specific facilities or scientists.
- Has direct access to Washington D.C. policymakers, influencing national priorities.
- Can mediate between military and scientific factions, resolving disputes.
- Can authorize or restrict publication, communication, or collaboration between project sites.
- Holds limited intelligence authority, allowing him to order investigations into leaks or inefficiencies.

James B. Conant represents the strategic intellect and bureaucratic backbone of the Manhattan Project, a man who saw science as a tool of statecraft and security. His role in the committee blends scientific credibility with political control, making him a vital figure for delegates seeking influence across both scientific and administrative domains.

Henry DeWolf Smyth

Physicist; Official Historian of the Manhattan Project; Scientific Liaison and Policy Advisor on Atomic Information

Background and Expertise

Henry DeWolf Smyth was an American physicist and public servant whose work bridged the worlds of science, ethics, and policy during one of history's most secretive undertakings. Born in 1898, Smyth earned his Ph.D. in physics from Princeton University and went on to become a professor and later chairman of the Princeton physics department, mentoring several leading scientists of his generation.

His pre-war research centered on nuclear physics, radiation, and atomic structure, placing him among the early American scientists aware of nuclear fission's potential. When the United States entered World War II, Smyth was recruited to assist the Manhattan Engineer District (MED) as a scientific liaison and policy consultant, working at the intersection of scientific research, military secrecy, and government communication.

After the war, Smyth authored the famous "Smyth Report", the first official public document describing the technical principles and development of the atomic bomb. This report, approved by the U.S. government in 1945, was a landmark in scientific transparency, revealing how atomic energy had been harnessed while concealing sensitive technical details.

Role in the Manhattan Project

During the project, Smyth operated as a liaison between scientific teams and Washington policymakers, ensuring that research progress and classified findings were properly communicated. He worked closely with General Leslie Groves, J. Robert Oppenheimer, and Vannevar Bush to balance the demands of secrecy with the scientific community's need for communication and clarity.

His primary functions included:

- Drafting scientific summaries and technical evaluations for high-level officials.
- Monitoring the scientific and ethical progress of the project's research arms.
- Advising on declassification policy, including what information could be released to the public or allied nations.
- Managing communications and publication policy for scientific findings related to fission and bomb development.
- Acting as a bridge between military administrators and academic scientists, translating technical results into policy-relevant insights.

Smyth's unique blend of scientific credibility and moral responsibility made him the moral compass and public voice of the project in its later stages.

Personality Traits and Leadership Style

Henry Smyth was known for his measured intellect, integrity, and moral sensitivity. Unlike some of his more pragmatic colleagues, Smyth often viewed science as a public trust, a pursuit that must be accountable to humanity, not just to governments or armies.

He was calm, rational, and diplomatic, with a strong sense of duty to both truth and national security. Smyth excelled at bridging ideological divides: between scientists and soldiers, secrecy and openness, innovation and ethics.

Smyth's leadership style was collaborative and introspective. He preferred to persuade rather than command, relying on logic and reason rather than authority. Yet, when ethical lines blurred, Smyth was known to speak out firmly, challenging colleagues to confront the consequences of their work.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (Deep mutual respect for intellectual integrity; both wrestled with the moral dimensions of their work), Vannevar Bush (Worked closely on matters of scientific communication and policy transparency), and Isidor Isaac Rabi (Shared belief in ethical responsibility and scientific openness)

Rivalries: Leslie R. Groves (dmired Groves's leadership but often disagreed over secrecy and the extent of government control) and Leo Szilard (Though ideologically aligned in caution, often clashed over methods, Smyth favored institutional reform over open dissent).

Neutral: Maintained professional relations with most military and industrial figures, often serving as a mediator during disputes over information control.

Ethical or Political Stance

Henry Smyth believed that scientists bear moral responsibility for how their discoveries are used. He accepted the necessity of wartime secrecy but viewed it as a temporary measure, not a permanent state policy.

He argued that the public must eventually understand the science behind the atomic bomb, both to ensure democratic oversight and to prevent future misuse. This philosophy directly inspired the publication of the Smyth Report, which sought to educate without endangering.

Politically, Smyth leaned toward moderate liberalism, advocating for civilian control of atomic energy and international cooperation on nuclear research. He saw science as a force for peace, but one that required transparency, regulation, and ethical foresight.

In the committee, Smyth embodies the voice of conscience and reason, urging balance between innovation and accountability.

Powers and Authority

As the official historian and policy advisor within the Manhattan Project, Smyth possesses significant influence over communication, declassification, and policy discourse. He can:

- Draft and release reports summarizing project progress (subject to approval).
- Recommend declassification or suppression of specific data or correspondence.
- Advise the chairs (Stimson and Groves) on ethical, scientific, or political implications of decisions.
- Propose frameworks for post-war atomic governance.
- Conduct internal investigations on information leaks or ethical breaches.
- Mediate between scientific and military factions in disputes over transparency or secrecy.
- Request access to classified project data.
- Censor or edit public reports.

Henry DeWolf Smyth stands as the intellectual conscience and historian of the Manhattan Project, a man torn between secrecy and truth, progress and responsibility. His role in the committee is to question, clarify, and chronicle, ensuring that the legacy of atomic research serves not just victory, but understanding.

Richard P. Feynman

Theoretical Physicist; Member of the Los Alamos Theoretical Division (T-Division); Specialist in Nuclear Physics and Bomb Design Calculations

Background and Expertise

Richard Phillips Feynman was one of the youngest and most brilliant theoretical physicists recruited to the Manhattan Project. Born in 1918, Feynman earned his Ph.D. from Princeton University under the supervision of John Archibald Wheeler, focusing on quantum electrodynamics and the mathematical modeling of subatomic interactions.

Before joining the project, he was already recognized for his exceptional problem-solving abilities, unconventional thinking, and mathematical precision. His groundbreaking insight into nuclear reactions and chain processes made him a vital contributor to the Los Alamos Theoretical Division (T-Division), led by Hans Bethe.

Feynman's deep understanding of physics, combined with his creativity and humor, made him indispensable in simplifying complex bomb design calculations, optimizing efficiency, and streamlining critical systems within the atomic bomb's detonation mechanism.

Role in the Manhattan Project

At Los Alamos, Feynman served as a key theoretical physicist, working primarily on the implosion design of the plutonium bomb ("Fat Man") and the calculations of neutron diffusion and critical mass. He developed new methods to speed up and simplify the highly complex mathematics involved in nuclear fission, allowing teams to progress more rapidly.

He also played a central role in coordinating computing efforts, both human and mechanical, ensuring calculation accuracy and reliability. Feynman managed the team responsible for verifying numerical data essential to the bomb's success.

Beyond the scientific front, Feynman became known for his insatiable curiosity and rebellious intellect, frequently questioning established procedures and testing security systems, even breaking into safes to demonstrate flaws in classified information handling.

His combination of humor, intellect, and boldness made him both a valued innovator and a constant challenge to authority.

Personality Traits and Leadership Style

Feynman was brilliant, eccentric, playful, and irreverent. He thrived on intellectual challenge, often thinking outside traditional hierarchies or expectations. His personality was characterized by wit, curiosity, and a disregard for formality, which sometimes clashed with the military discipline of the MED.

He was highly independent and preferred practical experimentation to abstract theorizing. His approach to leadership was informal, he motivated others by enthusiasm, logic, and humor rather than authority.

Feynman’s leadership style was innovative and subversive: he inspired creativity, questioned bureaucracy, and fostered problem-solving through unorthodox methods. However, his disregard for rules and tendency to “poke holes” in authority often placed him at odds with senior officials.

Alliances and Rivalries

Allies: Hans Bethe (Mentor and close collaborator; mutual respect and strong working relationship within T-Division), J. Robert Oppenheimer (Admired Feynman’s intellect and creativity, though often kept him in check), Enrico Fermi (Shared mutual fascination with theoretical simplicity and experimental accuracy), and Leo Szilard (Appreciated Feynman’s curiosity and humanistic thinking).

Rivalries: Edward Teller (Feynman mocked Teller’s obsession with the hydrogen bomb and melodramatic attitude), and the Security Staff (Feynman’s safecracking antics and irreverence toward classified restrictions caused repeated friction).

Neutral: Maintained friendly rapport with most scientific staff but had little patience for bureaucrats or overly political figures.

Ethical or Political Stance

Feynman initially approached the Manhattan Project with scientific curiosity and patriotic duty, but after the bombings of Hiroshima and Nagasaki, he became deeply reflective about the moral implications of nuclear physics.

While he did not oppose the project during wartime, he later admitted he had been “too absorbed in the puzzle to consider its consequences.” His ethical stance evolved into one of skepticism toward power and institutional secrecy, advocating for scientific openness and responsibility after the war.

Feynman distrusted political manipulation of science and rejected both blind militarism and moral absolutism, believing truth and understanding should always come before ideology.

Powers and Authority

While Feynman lacks administrative or military authority, he holds significant scientific influence within the Theoretical Division and can shape the direction of nuclear research through innovation and collaboration. He can:

- Propose or modify theoretical approaches to bomb design.
- Conduct independent experiments or simulations on chain reactions.

- Audit calculations and verify data accuracy, exposing potential flaws or sabotage.
- Request computing resources or research assistants for specialized work.
- Propose experimental modifications to improve detonation precision or safety.
- Expose inefficiencies or breaches in security through technical investigation.

Richard Feynman represents the unpredictable genius within the Manhattan Project, a brilliant, rebellious mind driven by curiosity more than conformity. His wit and intellect make him invaluable to the project’s scientific progress, but his disregard for authority can equally endanger its secrecy and stability.

John von Neumann

Mathematician and Physicist; Consultant to the Manhattan Project; Specialist in Shockwave Theory, Implosion Dynamics, and Computational Modeling

Background and Expertise

John von Neumann was one of the most brilliant mathematicians and polymaths of the 20th century, whose intellect spanned mathematics, physics, and early computer science. Born in Budapest, Hungary, in 1903, von Neumann completed a Ph.D. in mathematics at the University of Budapest at the age of 22 and quickly became a leading figure in quantum mechanics, game theory, and applied mathematics.

After emigrating to the United States in the 1930s to escape rising anti-Semitism in Europe, he joined the faculty at Princeton's Institute for Advanced Study, where he worked alongside Albert Einstein and other luminaries. His wartime expertise in ballistics and explosive shockwave physics made him indispensable to the U.S. Army and the Manhattan Engineer District.

By 1943, von Neumann was recruited as a consultant to the Manhattan Project, where his advanced understanding of hydrodynamics, non-linear differential equations, and explosive wave behavior played a key role in solving the critical problem of implosion design for the plutonium bomb.

Role in the Manhattan Project

Von Neumann's primary contribution was in applying mathematical theory to practical physics problems, particularly in improving the implosion mechanism of the plutonium bomb ("Fat Man"). His expertise allowed scientists to understand how shockwaves could compress plutonium evenly, achieving critical mass before the material disassembled itself.

He developed mathematical models of explosive lenses, which directed converging shockwaves toward the bomb's core, ensuring symmetrical implosion. Von Neumann's theoretical work transformed the implosion design from an uncertain experiment into a precisely engineered weapon.

He also advised on high-explosive testing and detonation timing systems, frequently collaborating with engineers and theorists at Los Alamos. His later input would become foundational for modern computing and simulation, as his mathematical formulations enabled the early design of mechanical and electronic computing systems used for nuclear calculations.

Personality Traits and Leadership Style

Von Neumann was intellectually unmatched, intensely analytical, and socially eccentric. Known for his photographic memory and lightning-fast reasoning, he could perform calculations mentally that others required hours for.

He approached problems with cold precision and unemotional logic, viewing science as a tool for mastery rather than moral reflection. Despite his detached nature, von Neumann was highly respected, and sometimes feared, for his ability to reduce complex debates to pure logic.

In leadership, he preferred strategic influence over direct control, guiding others with insight and persuasion rather than authority. He was pragmatic, efficient, and famously indifferent to ethical discussions, focusing instead on results and problem-solving.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (Valued von Neumann's mathematical rigor and relied on him for theoretical consultations) and Hans Bethe (Collaborated closely on implosion dynamics and shared a mutual respect for scientific precision).

Rivalries: Leo Szilard and Niels Bohr (Often clashed philosophically; von Neumann dismissed moral debates over nuclear weapons as "irrelevant to the mathematics.")

Neutral: Maintained cordial but professional relationships with most of Los Alamos' staff; rarely engaged in personal disputes.

Ethical or Political Stance

Von Neumann's stance on nuclear ethics was utilitarian and unapologetically pragmatic. He viewed the atomic bomb as a necessary weapon for ending the war and later advocated for aggressive deterrence through superior nuclear firepower during the early Cold War.

Unlike many scientists who later expressed regret, von Neumann argued that "if you're going to do it, you should do it completely and efficiently." His moral framework revolved around strategic stability and survival, not pacifism or restraint.

Politically, he was a staunch anti-communist and later became one of the architects of U.S. nuclear policy, influencing early Cold War strategy and deterrence theory.

Powers and Authority

Von Neumann, as a scientific consultant, holds intellectual and theoretical authority rather than administrative or military command. However, his influence extends across both scientific and strategic domains due to his unmatched expertise in mathematics and physics.

He can:

- Propose new implosion or detonation designs based on mathematical models.
- Conduct or oversee simulation experiments related to shockwave symmetry and timing.
- Provide strategic analyses for efficiency and risk reduction.
- Evaluate and critique scientific proposals with high credibility.
- Influence Oppenheimer's and Bethe's decisions through theoretical argumentation.

- Contribute to the development of early computational systems for nuclear research.

John von Neumann represents the cold intellect and strategic genius within the Manhattan Project, a man who saw war, science, and logic as interdependent systems to be optimized. His detached pragmatism made him one of the most powerful minds in the MED, capable of shaping theory, influencing leadership, and redefining the boundaries of applied mathematics.

Eugene Wigner

Theoretical Physicist; Expert in Nuclear Structure and Reactor Design; Consultant to the Metallurgical Laboratory and Los Alamos Theoretical Division

Background and Expertise

Eugene Paul Wigner, born in 1902 in Budapest, Hungary, was one of the most accomplished theoretical physicists of his generation. Before the Manhattan Project, Wigner made groundbreaking contributions to quantum mechanics, particularly in the field of group theory and its application to atomic structure, a foundation of modern particle physics.

Emigrating to the United States in the 1930s, Wigner joined Princeton University and became a close collaborator of Albert Einstein. His early work on nuclear fission, alongside Leo Szilard and Enrico Fermi, laid the scientific groundwork for controlled chain reactions, making him one of the intellectual architects of nuclear energy.

In 1939, Wigner co-authored the famous Einstein–Szilard letter to President Franklin D. Roosevelt, warning of Nazi Germany's potential to develop an atomic weapon. This letter directly led to the creation of the U.S. atomic program and, eventually, the Manhattan Project itself.

Role in the Manhattan Project

Wigner served primarily at the Metallurgical Laboratory (Met Lab) in Chicago, where he designed the first nuclear reactors and developed theoretical models for neutron moderation and plutonium production. His designs were instrumental in constructing Chicago Pile-1, the world's first artificial nuclear reactor.

He worked closely with Enrico Fermi and Glenn Seaborg to refine reactor safety, control mechanisms, and materials efficiency. Later, he contributed as a consultant to Los Alamos, advising on neutron cross-section calculations, radiation shielding, and critical mass estimations.

Wigner's engineering foresight ensured the practical translation of theoretical physics into a functioning, large-scale nuclear system, making mass plutonium production possible for the atomic bomb.

Personality Traits and Leadership Style

Eugene Wigner was reserved, methodical, and deeply intellectual. Unlike many of his more flamboyant colleagues (such as Feynman or Teller), he approached science with quiet precision and moral seriousness.

He valued discipline, caution, and moral reflection, often serving as the voice of ethical restraint within scientific discussions. Wigner was a natural problem-solver with a preference for logic and structure, and his leadership style emphasized collaboration and respect for expertise.

While not outspoken, his opinions carried great weight due to his authority and rational clarity. He mentored younger scientists, emphasizing accuracy and prudence above speed or risk-taking.

Alliances and Rivalries

Allies: Leo Szilard (Lifelong friend and collaborator; shared moral and scientific views on atomic power and humanity's responsibility), Enrico Fermi (Collaborated closely on reactor physics; mutual scientific admiration), and Niels Bohr (Aligned in philosophical discussions on the ethical future of nuclear science).

Rivalries: Edward Teller (Disagreed with Teller's aggressive push for thermonuclear research, viewing it as reckless).

Neutral: Maintained cordial but professional relationships with most of Los Alamos' staff; rarely engaged in personal disputes.

Ethical or Political Stance

Wigner was among the most ethically reflective figures in the Manhattan Project. While he believed the bomb was necessary to end World War II, he grew increasingly uneasy about the long-term implications of nuclear weapons.

After the war, Wigner became a vocal advocate for civilian control of atomic energy and international cooperation in nuclear research, warning against militarization and secrecy. He believed science should serve peace and progress, not destruction.

Politically, he leaned toward cautious pragmatism, loyal to the U.S. war effort but firmly against the indiscriminate use of scientific knowledge.

Powers and Authority

Wigner holds no military command but possesses immense scientific credibility and influence over nuclear design decisions. His authority stems from his technical mastery and reputation as one of the founders of nuclear theory. He can:

- Approve or veto reactor design modifications based on safety or efficiency.
- Advise on plutonium yield and production strategies.
- Lead theoretical consultations on neutron physics and chain reaction stability.
- Recommend scientists for specialized reactor or weapon research teams.
- Raise ethical objections or safety warnings during internal deliberations.

Eugene Wigner represents the conscience and intellect of the Manhattan Project, a figure balancing brilliant technical innovation with deep moral foresight. His work made nuclear chain reactions viable, but his introspection serves as a reminder that knowledge without restraint can endanger all humanity.

Robert Serber

Theoretical Physicist; Senior Member of the Los Alamos Theoretical Division (T-Division); Principal Author of the "Los Alamos Primer"

Background and Expertise

Robert Serber (1909–1997) was one of J. Robert Oppenheimer's most trusted protégés and among the first scientists recruited to the Manhattan Project. A brilliant theoretical physicist, Serber earned his Ph.D. under Oppenheimer at the University of California, Berkeley, where he became known for his analytical clarity and deep understanding of nuclear reactions.

Before joining the project, Serber worked on neutron diffusion, critical mass theory, and the physics underlying chain reactions, foundational knowledge for nuclear fission research. His combination of intelligence, humility, and precision made him an invaluable bridge between theory and practical application.

Serber's defining contribution came at the very start of the Los Alamos phase of the project. He was tasked by Oppenheimer to summarize the entire body of nuclear knowledge for new recruits, resulting in the "Los Alamos Primer", a series of secret lectures (and later, documents) that served as the fundamental textbook for all scientists working on the atomic bomb.

Role in the Manhattan Project

At Los Alamos, Serber served as a senior theorist within the T-Division, directly under Hans Bethe and Oppenheimer. His responsibilities included explaining the physics of fission and fusion, calculating neutron behavior, and developing models for bomb efficiency.

He introduced the codenames "Thin Man" and "Fat Man" for the uranium and plutonium bomb designs, respectively, terminology that became central to the project.

Serber worked on both the gun-type uranium bomb and the implosion-type plutonium bomb, focusing on optimizing fissile material use and calculating critical masses under various conditions. His technical mastery and communication skills made him the intellectual "translator" between theoretical scientists and experimental engineers.

Additionally, Serber often acted as a confidential adviser to Oppenheimer, reviewing design proposals and mediating disputes within scientific teams.

Personality Traits and Leadership Style

Robert Serber was meticulous, rational, and composed, the embodiment of scientific professionalism. Though less flamboyant than figures like Feynman or Teller, his calm intellect commanded quiet respect among peers.

He was modest, logical, and deeply loyal to Oppenheimer, often serving as his voice of reason and technical interpreter. Serber's leadership style emphasized clarity, precision, and collaboration; he preferred to explain complex issues rather than dictate them.

While not a charismatic leader, he was a stabilizing presence, dependable in crises, unshaken by military pressure, and capable of simplifying chaos into manageable scientific problems.

Alliances and Rivalries

Allies: J. Robert Oppenheimer (Mentor, close friend, and professional partner; Serber was one of the few scientists Oppenheimer fully trusted), **Hans Bethe** (Worked closely under Bethe's leadership in the T-Division; shared mutual respect for precision and clarity) and **Enrico Fermi** (Shared mutual interest in nuclear physics fundamentals and reactor safety).

Rivalries: Edward Teller (Serber found Teller's dramatics and obsession with hydrogen weapons distracting and morally questionable).

Ethical or Political Stance

Serber viewed the Manhattan Project as a necessary scientific and wartime endeavor but remained personally uneasy about its destructive potential. While he did not openly oppose the project, he later expressed profound regret over the bombings of Japan, questioning whether the scientists should have resisted military escalation.

He believed science should serve humanity, not destroy it, a conviction that deepened after his wife, Charlotte Serber (Los Alamos librarian), faced unjust suspicion during the postwar Red Scare. Serber's later life was marked by disillusionment with government secrecy and the moral burden of scientific achievement.

Powers and Authority

While Serber did not possess formal command, his influence at Los Alamos was intellectual and organizational. He could:

- Issue or modify internal theoretical models used for design reference.
- Conduct or authorize educational briefings for new recruits.
- Evaluate theoretical proposals or alternative bomb mechanisms.

Robert Serber represents the rational backbone of the Manhattan Project, a man who transformed abstract nuclear theory into coherent, actionable science. His precise thinking and quiet authority kept Los Alamos intellectually unified amidst chaos and secrecy.

Harold M. Agnew

Physicist; Los Alamos Laboratory Staff; Assistant to Enrico Fermi; Eyewitness to Hiroshima Mission and Key Figure in Weapon Assembly Physics

Background and Expertise

Harold Melvin Agnew (1921–2013) was a young but exceptionally skilled experimental physicist who played a crucial technical role in the Manhattan Project. He studied under Enrico Fermi at the University of Chicago, where he worked on the Chicago Pile-1 experiment, the first self-sustaining nuclear chain reaction, gaining firsthand experience in the birth of controlled fission.

After his work at Chicago, Agnew followed Fermi to Los Alamos, where he contributed to the Weapons Division, specializing in weapon assembly design, neutron measurement, and diagnostic instrumentation. His background as both a practical engineer and an experimental physicist made him one of the few young scientists trusted to work on sensitive detonation and delivery mechanisms.

Agnew later became one of the only individuals to accompany the Hiroshima mission as a scientific observer, flying aboard *The Great Artiste*, the companion plane to *Enola Gay*, where he filmed the detonation and collected post-blast data, a testament to his direct link between theoretical design and real-world execution.

Role in the Manhattan Project

At Los Alamos, Agnew served under Enrico Fermi and Robert Bacher, contributing to the assembly and testing of the plutonium implosion bomb ("Fat Man"). He was responsible for:

- Designing diagnostic instruments to measure neutron flux and yield.
- Ensuring synchronization between the core, detonators, and surrounding explosives.
- Overseeing final weapon assembly alongside Navy Captain William Parsons.
- Testing bomb casings and firing circuits prior to deployment.

He was also part of the Trinity Test preparations, where he assisted in calibrating instrumentation to record energy output and explosion symmetry. Agnew's hands-on expertise made him one of the few scientists with both theoretical and mechanical mastery of the bomb's internal systems.

Personality Traits and Leadership Style

Agnew was pragmatic, bold, and highly competent, a rare combination of youthful energy and technical discipline. Though younger than most of his peers, he possessed remarkable confidence, shaped by his mentorship under Fermi and his direct experience with nuclear experiments.

He was calm under pressure, decisive in engineering crises, and adaptable when field conditions changed. His sense of humor and informal attitude helped him integrate into Los Alamos' intense but eccentric environment.

While not a commanding leader, Agnew was an excellent collaborator who earned respect through results, not rank. His leadership style was technical, cooperative, and quietly authoritative, he led through knowledge, not ego.

Alliances and Rivalries

Allies: Enrico Fermi (Mentor and role model; Agnew was one of Fermi's closest protégés), William S. Parsons (Collaborated on bomb assembly and flight coordination; shared respect for precision under pressure), Robert Bacher (Worked alongside Bacher on weapon physics and testing apparatus), and Richard Feynman (Shared camaraderie and curiosity about the practical applications of theoretical results).

Rivalries: Edward Teller (Found Teller's arrogance and obsession with theoretical grandstanding impractical).

Ethical or Political Stance

Agnew was unapologetically pragmatic. During the war, he viewed the Manhattan Project as a matter of strategic necessity, the only way to end the conflict quickly and decisively. He showed little interest in moral or political debate, believing that his duty was to make the weapon function effectively and safely.

However, in later years, Agnew became a firm advocate for nuclear deterrence and scientific responsibility, emphasizing that the true ethical question lay in how governments used the weapons, not in their creation. He remained loyal to the scientific community but believed in the importance of national security and technological superiority.

Powers and Authority

While Agnew does not command a major division, his role gives him substantial technical leverage and access within Los Alamos' inner workings. He can:

- Authorize field tests and calibration experiments.
- Access and modify bomb assembly schematics and detonation blueprints.
- Conduct diagnostic research or instrument development.
- Approve or deny technical changes to weapon design.
- Liaise with Parsons or Fermi on final assembly logistics.
- Request aircraft or transport resources for test data collection.

Because of his involvement in the final weapon assembly, Agnew's influence lies in the last stage of bomb completion, giving him quiet but critical control over whether the project succeeds or fails in practice.

Luis W. Alvarez

Experimental Physicist; Los Alamos Laboratory; Specialist in Detonation Physics and Airburst Mechanisms

Background and Expertise

Luis Walter Alvarez (1911–1988) was a brilliant and inventive American experimental physicist whose expertise spanned radar, electronics, and nuclear physics. Before the Manhattan Project, Alvarez earned his Ph.D. from the University of Chicago and became a prominent researcher at the University of California, Berkeley, under Ernest O. Lawrence, where he developed particle accelerators and advanced radiation detection techniques.

During World War II, Alvarez worked on radar and proximity fuse development at the MIT Radiation Laboratory, demonstrating exceptional skill in combining physics with practical engineering. His transition to the Manhattan Project came at the request of Lawrence and General Leslie Groves, who needed his unique ability to translate theory into applied weapon systems.

Alvarez's combination of experimental precision, innovation, and engineering practicality made him indispensable to Los Alamos, particularly in designing bomb instrumentation and measuring nuclear blast effects.

Role in the Manhattan Project

At Los Alamos, Alvarez played a critical role in developing the airburst detonation system for the atomic bomb, ensuring the weapon would explode at the optimal altitude for maximum destructive effect.

His responsibilities included:

- Designing and testing the radio-controlled proximity fuse used in the bomb's final detonation mechanism.
- Overseeing instrumentation and measurement systems for yield, energy output, and radiation distribution.
- Training and equipping field personnel for in-flight bomb monitoring.
- Participating in the Trinity Test and later flying aboard *The Great Artiste* during the Hiroshima mission, where he and his team collected scientific data on the blast's energy output and detonation sequence.

Alvarez's fusion of physics and engineering ensured the bomb's deployment was not only powerful but scientifically measurable, turning a weapon into an experiment in applied nuclear science.

Personality Traits and Leadership Style

Alvarez was analytical, confident, and endlessly inventive, a quintessential experimental physicist who valued results and practical applications over philosophical debates. He was known for his calm precision, technical brilliance, and readiness to tackle unsolved problems head-on.

His personality was a blend of curiosity and competitiveness. Alvarez worked best under pressure and was drawn to projects that combined science and engineering innovation. While he respected theoretical physicists like Oppenheimer and Fermi, he preferred hands-on experimentation and clear objectives.

As a leader, he was methodical and composed, favoring data-driven decisions over speculation. He had little patience for inefficiency or academic posturing, preferring direct and measurable progress.

Alliances and Rivalries

Allies: Ernest Lawrence (Mentor and close collaborator; Alvarez was one of Lawrence's most trusted protégés), William S. Parsons (Shared mutual respect for precision engineering and practical weapon deployment), and Harold Agnew (Fellow experimentalist and data analyst on the Hiroshima mission; strong professional partnership).

Rivalries: Edward Teller (Alvarez viewed Teller's focus on the hydrogen bomb as reckless and untested), and Theoretical Division members (Often frustrated with the slow pace of purely theoretical debates, preferring hands-on solutions).

Ethical or Political Stance

Alvarez firmly believed in the strategic necessity of the atomic bomb. For him, science served national defense and technological progress. He viewed the Manhattan Project as a moral obligation to end the war and prevent even greater loss of life through prolonged combat.

He did not express moral hesitation during the war but later advocated for scientific responsibility and arms control. After witnessing the atomic age's power firsthand, Alvarez believed that science must inform policy, emphasizing rational deterrence over moral panic.

Politically, he leaned toward pragmatic nationalism, he believed the U.S. should maintain scientific superiority to preserve peace, not surrender it to idealism.

Powers and Authority

While Alvarez lacked administrative or military authority, his experimental expertise gave him critical operational control in bomb deployment and data acquisition. He can:

- Authorize and supervise experimental tests on bomb detonation systems.

- Design or improve proximity fuses, timers, or radio-controlled mechanisms.
- Propose new methods for measuring nuclear yield and efficiency.
- Oversee calibration of diagnostic equipment at Los Alamos or in field tests.
- Recommend or approve field teams for test observation and in-flight missions.
- Influence engineering divisions through technical directives and data-based findings.

Luis Alvarez represents the bridge between pure science and practical warfare, the embodiment of experimental precision in a project often dominated by theory. His power lies not in rank but in technical indispensability.

Norman Foster Ramsey Jr.

Experimental Physicist; Los Alamos Laboratory and Columbia University; Specialist in Nuclear Measurements and Bomb Assembly Timing Systems

Background and Expertise

Norman Foster Ramsey Jr. (1915–2011) was an American physicist renowned for his precision measurements and contributions to nuclear and quantum physics. Educated at Columbia University and later Cambridge University, Ramsey studied under Isidor Isaac Rabi, whose mentorship shaped his mastery of experimental technique and instrumentation.

Before joining the Manhattan Project, Ramsey worked on radar and microwave technology during World War II, developing advanced timing systems that proved essential for synchronizing detonations and bomb assembly mechanisms. His expertise in precision physics, measuring nuclear properties, timing reactions, and controlling particle behavior, made him an indispensable asset to the Los Alamos Laboratory.

After the war, Ramsey went on to make groundbreaking discoveries in atomic spectroscopy and later won the Nobel Prize in Physics (1989), but during the Manhattan Project, his focus remained on perfecting the mechanics of nuclear detonation timing.

Role in the Manhattan Project

At Los Alamos, Ramsey was responsible for solving key technical challenges related to detonation synchronization and bomb assembly design, particularly for the *Little Boy* (uranium) and *Fat Man* (plutonium) weapons.

His primary roles included:

- Designing timing and triggering mechanisms for bomb assembly to ensure the fissile material reached critical mass at the precise moment of detonation.
- Overseeing testing of electrical circuits and fuses essential to bomb safety and functionality.
- Collaborating with William S. Parsons and Luis W. Alvarez on aircraft delivery systems and instrumentation for airburst control.
- Managing technical integration between theory and field testing teams to translate scientific designs into combat-ready devices.

Ramsey's meticulous attention to timing and system reliability directly contributed to the successful deployment of both atomic bombs, ensuring that the complex chain of detonation events operated flawlessly.

Personality Traits and Leadership Style

Ramsey was methodical, disciplined, and intellectually modest, a classic experimentalist who believed precision and clarity were the foundation of scientific truth. He balanced scientific rigor with quiet leadership, preferring to solve problems through collaboration and careful experimentation rather than debate or confrontation. Known for his calm demeanor and focus under pressure, Ramsey commanded respect not through authority but through competence. His patience and technical brilliance made him a stabilizing presence in the often volatile Los Alamos environment.

Alliances and Rivalries

Allies: Isidor Isaac Rabi (mentor and close collaborator; shared a long academic and professional relationship), and Hans Bethe (worked closely on integrating timing with theoretical reaction sequences).

Rivalries: Edward Teller (Ramsey viewed Teller's push for the hydrogen bomb as scientifically premature), and the military administrators who rushed scientific testing schedules.

Ethical or Political Stance

Ramsey's outlook was pragmatic and grounded in a sense of duty. He believed the Manhattan Project was a necessary wartime endeavor, justified by the need to end the war and save lives. However, like many scientists, he later reflected deeply on its moral implications, becoming an advocate for international scientific cooperation and nuclear control after 1945.

He valued the pursuit of knowledge but believed it should be guided by responsibility and rational governance. Politically moderate, Ramsey avoided ideological extremes and focused instead on ensuring scientific progress served humanity rather than destruction.

Powers and Authority

As one of the chief experimental physicists at Los Alamos, Ramsey possesses technical authority over detonation, timing, and bomb assembly systems. His influence stems from his control over precision instrumentation and testing reliability. He can:

- Authorize or modify bomb triggering and timing mechanisms.
- Oversee the testing of detonation synchronization systems.
- Conduct or approve diagnostic experiments on assembly timing and reliability.
- Allocate lab resources and technical staff for specialized measurement projects.
- Delay or accelerate final testing phases based on safety and precision evaluations.
- Propose new synchronization models or safety protocols for bomb deployment.

Norman Foster Ramsey Jr. represents the precision and reliability backbone of the Manhattan Project. His influence lies in control over timing and detonation mechanisms, which determine whether a weapon functions or fails.

Seth H. Neddermeyer

Experimental Physicist; Early Advocate and Leader of Implosion Research, Los Alamos Laboratory

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Background and Expertise

Seth Henry Neddermeyer (1907–1988) was an American experimental physicist noted for his practical ingenuity and hands-on approach to difficult physical problems. Trained as an experimentalist, Neddermeyer had a background in particle and cosmic-ray physics and years of experience designing and running demanding laboratory experiments. His practical skillset, building apparatus, designing diagnostics, and carrying an experimental idea from concept to prototype, made him a natural fit for the urgent, engineering-heavy problems at Los Alamos.

He arrived at the Manhattan Project as one of the project's pragmatic problem-solvers: less a celebrated theorist and more a builder of experiments and demonstrator of physical principles under real conditions.

Role in the Manhattan Project

Neddermeyer was an early and persistent champion of the implosion method for compressing plutonium to supercritical density. Whereas the gun-type design worked for uranium, preliminary theoretical and metallurgical problems suggested gun-type would fail for plutonium; Neddermeyer argued that symmetrical implosion could be the solution. He led the preliminary implosion experiments, helped design early diagnostics to measure compression, and pushed the project to take implosion seriously when many in the community considered it speculative and high-risk.

Although explosive lens design and mass production of precise detonators became the purview of other groups (notably teams led by people such as George Kistiakowsky and William Parsons on ordnance aspects), Neddermeyer's early experiments and leadership were critical in convincing Los Alamos that implosion was feasible and worth the enormous engineering effort that followed.

Personality Traits and Leadership Style

Neddermeyer was practical, dogged, and experimentally fearless. He preferred to show rather than argue, building test rigs, firing early experiments, and letting data settle debates. He was persistent in the face of skepticism, willing to take responsibility for risky trials, and comfortable working at the intersection of theory, explosives, and measurement.

As a leader he was hands-on and collegial, often working alongside technicians and younger scientists rather than presiding from a distance. He could be stubborn about ideas he believed in, but his tenacity came from confidence in experimental proof rather than rhetorical force.

Alliances and Rivalries

- **Allies:** Experimentalists and technicians who valued practical demonstration; some theoreticians who came to accept implosion (e.g., parts of the Los Alamos theoretical group once convinced by data).

- **Rivalries/Tensions:** Early friction with skeptics who saw implosion as impractical or wasteful of scarce resources; occasional clashes with high-level administrators over the cost and risk of implosion development.

He occupied a bridging role, trusted by hands-on engineers and respected by theorists once results supported his proposals.

Ethical or Political Stance

Neddermeyer was a practical wartime scientist: his primary ethical frame was that of engineering responsibility, build safe, reliable systems that work. He did not typically engage in sweeping moral debates about the bomb's use; his concern was that if a weapon was to exist, it be designed competently and tested responsibly to avoid unintended catastrophe. In political terms he deferred to military and civilian authorities and prioritized successful technical outcomes over public or ideological positioning.

Powers and Authority

Within the MED, Neddermeyer's authority is technical and experimental rather than administrative:

- Initiate and direct implosion experiments and small-scale explosive trials.
- Control experimental diagnostics (high-speed cameras, pressure gauges, neutron detectors) and the personnel who run them.
- Propose and lead prototype development for compression systems and detonator timing approaches.
- Recommend allocation of limited experimental resources (test charges, diagnostic instrumentation, lab time) to implosion work.
- Order a targeted series of compression diagnostics to resolve a specific implosion asymmetry.
- Requisition specialized high-speed recording equipment or calibrated pressure gauges for immediate testing.
- Propose a focused, short-term test program to validate a new explosive lens surrogate material.

- Form a cross-discipline task force (experimentalists + ordnance) to convert a successful bench experiment into a full-scale engineering specification.

Seth Neddermeyer is the experimental backbone of the implosion story in the Manhattan Project, the persistent tinkerer who turned a risky theoretical idea into an experimentally validated approach. In committee play he represents the voice that demands tests, data, and hands-on problem solving. He can unlock technical breakthroughs, but his power depends on winning scarce resources and persuading higher authorities that the risk is worth taking.

Darleane C. Hoffman

Nuclear Chemist; Specialist in Transuranic Elements and Radioactivity; Expert Consultant on Plutonium Chemistry and Fission Product Analysis

Background and Expertise

Darleane Christian Hoffman (born 1926) is an American nuclear chemist who became one of the foremost experts in the study of transuranic elements, those heavier than uranium. Although her major scientific prominence came after World War II, her expertise in nuclear chemistry, radiochemistry, and fission product behavior makes her a perfect representative of the *next-generation nuclear scientists* who bridged the gap between the Manhattan Project's wartime innovation and postwar atomic research.

Trained at Iowa State University, Hoffman's early work focused on the chemical properties of plutonium and its isotopes, particularly the challenges of handling, isolating, and analyzing radioactive materials. Her career later included groundbreaking discoveries, including the confirmation of the existence of seaborgium (element 106) and studies on spontaneous fission, but her foundations were deeply rooted in the experimental and chemical methodologies developed during the Manhattan Project era.

Role in the Manhattan Project

As a radiochemist and plutonium specialist, Hoffman's role can be summarized as "guardian of the atom's behavior." She would oversee:

- Chemical purification of plutonium to remove neutron-absorbing impurities (critical for sustaining chain reactions).
- Isotopic analysis and yield verification, measuring fission product ratios to confirm efficiency of bomb tests.
- Material safety and containment, ensuring that plutonium and uranium compounds are chemically stable and handled safely by lab personnel.
- Radiochemical diagnostics, analyzing debris or residue from experimental detonations to determine reaction completeness.

She represents the chemical side of nuclear physics, the bridge between theoretical calculations and the messy, reactive, radioactive substances that make or break those theories in reality.

Personality Traits and Leadership Style

Hoffman is precise, methodical, and quietly assertive. Her strength lies not in theatrics or confrontation, but in her unflinching commitment to scientific accuracy and safety. She has a calm but firm demeanor, earning respect through competence and diligence rather than charisma or politics.

She values collaboration and mentoring, often working closely with junior chemists and technicians to ensure high lab standards. Her approach is safety-conscious, detail-oriented, and ethically aware, making her both a stabilizing force and a subtle moral compass in environments dominated by high-stakes ambition.

Alliances and Rivalries

- **Allies:** Glenn T. Seaborg (shared background in nuclear chemistry and actinide research), Enrico Fermi (mutual respect for experimental rigor), and J. Robert Oppenheimer (appreciated her technical precision and composure).

- **Rivalries:** Edward Teller (philosophical conflict: Teller's reckless pursuit of destructive innovation clashes with Hoffman's cautious, data-driven ethos); potentially engineers or administrators who overlook chemical safety protocols for the sake of expediency.

- **Neutral Relationships:** Maintains professionalism across divisions, often acting as a mediator when theory and chemistry departments clash.

Ethical or Political Stance

Hoffman's ethics are rooted in scientific responsibility. She believes knowledge must serve humanity, not dominate it. While she respects the wartime urgency that birthed nuclear research, she strongly advocates for:

- Transparency in science over secrecy.
- Ethical oversight in weapons research.
- Safe, peaceful applications of nuclear energy.

Postwar, Hoffman became a vocal proponent for women in science, scientific integrity, and responsible nuclear stewardship, emphasizing education, disarmament, and collaboration over militarization.

In simulation terms, she is the moral and safety authority: questioning reckless tests, opposing weaponization without oversight, and prioritizing scientific truth over political or military gain.

Powers and Authority

Hoffman's authority lies in her control of nuclear chemistry labs, analytical data, and safety certification processes. She can:

- Approve or block experiments involving radioactive isotopes if purity or safety thresholds aren't met.
- Analyze and report on fissile material behavior, influencing major project decisions (e.g., implosion viability or efficiency metrics).
- Authorize chemical separations and isotopic refinement, determining material readiness for weapon assembly.

- Certify or condemn plutonium batches as chemically unstable or neutron-poisoned.
- Conduct independent radiochemical assays to confirm or challenge official efficiency reports.
- Issue safety alerts if chemical containment or radiation exposure limits are breached.
- Enforce stricter safety protocols for handling alpha-emitting isotopes.
- Use classified chemical data to publish unauthorized findings on nuclear isotopes.

Darleane C. Hoffman embodies the rational conscience of nuclear research: a scientist who seeks mastery of the atom through understanding, not control. Her character introduces the often-overlooked chemistry and safety dimension of the Manhattan Project, grounding its chaos in discipline and scientific rigor.

Harold C. Urey

Physical Chemist; Nobel Laureate; Specialist in Isotope Separation and Heavy Water Research; Director of the Manhattan Project's Isotope Separation Program

Background and Expertise

Harold Clayton Urey (1893–1981) was an American physical chemist and Nobel Laureate, best known for discovering deuterium (heavy hydrogen) in 1931, a breakthrough that earned him the 1934 Nobel Prize in Chemistry. Before the Manhattan Project, Urey had already achieved international acclaim for his pioneering work in isotopic chemistry, and his research laid the foundation for uranium isotope separation, a process essential for producing the enriched uranium used in the atomic bomb.

A professor at Columbia University before the war, Urey was one of the first prominent scientists to warn that Nazi Germany could be developing a nuclear weapon. His expertise in isotopes made him one of the most valuable scientific assets in the United States' early atomic efforts.

Urey's pre-Manhattan work on heavy water and isotope fractionation directly influenced the design of uranium enrichment plants at Oak Ridge and guided the theoretical basis for isotope diffusion methods.

Role in the Manhattan Project

Within the Manhattan Engineer District, Urey served as Director of the Isotope Separation Program and oversaw critical early research into uranium enrichment techniques. Working primarily at Columbia University, he led teams developing and refining processes such as:

- Gaseous diffusion and centrifugal separation of uranium isotopes (U-235 from U-238).
- Heavy water production for use as a potential moderator in nuclear reactors.
- Chemical analysis of isotopic purity and fissionable material efficiency.

Urey's division was one of the first scientific groups to receive funding under General Groves' supervision, and his research helped determine which isotope separation methods were most feasible for large-scale industrial application.

He also served as an advisor to Groves and Oppenheimer, bridging chemistry, physics, and engineering, ensuring that isotope separation research aligned with the project's larger goals.

Personality Traits and Leadership Style

Harold Urey was brilliant, methodical, and principled, but also deeply idealistic and emotional about the moral implications of atomic research. He combined an analytical mind with a strong moral compass and an unyielding belief in the ethical responsibility of scientists.

He was cautious but decisive, preferring precision over speed, a trait that occasionally frustrated military officials pushing for rapid results. Despite this, his leadership inspired loyalty and intellectual respect among his subordinates.

Urey's emotional depth sometimes made him appear hesitant or overly moralistic in the eyes of more pragmatic figures like Groves or Nichols.

Alliances and Rivalries

Allies: James B. Conant (shared emphasis on ethical science and academic leadership), Enrico Fermi (mutual respect for nuclear precision and isotope theory), J. Robert Oppenheimer (respected Urey's intellect and moral seriousness), and Niels Bohr (deep philosophical alignment regarding scientific responsibility).

Rivalries: General Leslie Groves (clashed over bureaucratic rigidity and pressure for speed), Ernest Lawrence (competition between centrifuge vs. electromagnetic enrichment methods), and Edward Teller (opposed Teller's eagerness for destructive innovation).

Neutral: Maintained professionalism with most, though found military hierarchy personally distasteful.

Ethical or Political Stance

Urey was one of the most outspoken moral voices in the Manhattan Project. He joined the program out of fear that Germany would develop the bomb first, but once that threat ended, he became openly conflicted about its use.

He believed the atomic bomb should serve as a deterrent, not a weapon, and later advocated for international nuclear control and scientific transparency. Urey's postwar writings emphasized the need for global cooperation and denounced secrecy and militarization of science.

Politically, he leaned toward internationalism and pacifism, believing scientists had a duty to humanity above nations.

Powers and Authority

Within the Manhattan Project, Urey wielded substantial authority over isotope research and separation methods, as well as influence in scientific ethics discussions. His powers include:

- Authorize or cancel isotope research projects and enrichment experiments.
- Allocate resources for centrifuge, gaseous diffusion, or heavy water production.
- Oversee quality control of isotopic materials sent to Oak Ridge or Los Alamos.
- Issue scientific advisories to redirect or refine bomb production techniques.
- Lead moral or technical inquiries into the consequences of using the bomb.

- Propose joint initiatives with other divisions (e.g., Fermi or Compton) for reactor design or isotope stability studies.
- Launch a centrifuge enrichment experiment to optimize U-235 extraction.
- Request additional funding for heavy water research to support reactor moderation.
- Initiate collaboration with Los Alamos theorists to test isotope behavior under fission.
- Implement strict isotope purity testing standards for bomb core materials.
- Establish an ethical subcommittee to review long-term scientific risks.

Harold C. Urey represents the moral conscience and scientific precision of the Manhattan Project, a man torn between the brilliance of discovery and the burden of its consequences. His mastery of isotope chemistry made the bomb possible, but his humanity made him question whether it should be used.