# 1 Terminology and Definitions

<table>
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<th>Nuclear Weapons and Proliferation Key Definitions</th>
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<tr>
<td><strong>Deterrence</strong>: An effort to persuade someone, usually an adversary, not to take a particular action. Starts with you setting the stage and waiting; an action is benign until the challenger takes an action.</td>
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<td><strong>Compellence</strong>: An effort to persuade someone, usually an adversary, to take a particular action. Starts with you generally initiating an action that becomes benign only if the challenger takes some action.</td>
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<td><strong>Counterforce</strong>: Aiming weapons at weapons or military targets (military value)</td>
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<td><strong>Countervalue</strong>: Aiming weapons at cities or populations (civilian value)</td>
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<td><strong>Preventive War</strong>: A state targets an enemy before they can pose an imminent threat of attack, e.g. Osirak bombing, Pearl Harbor</td>
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<td><strong>Preemptive War</strong>: A state targets an enemy that represents an imminent threat of attack, e.g. Six Day War, Iraq War</td>
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<td><strong>First-Strike Capabilities</strong>: A state which uses nuclear weapons against a target first</td>
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<td><strong>Second-Strike Capabilities</strong>: A state has sufficient retaliatory weapons to counter a first strike. These include ICBMs, cruise missiles, nuclear submarines, or other resources that could be deployed after an initial strike and act for retaliatory purposes</td>
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<td><strong>Nonproliferation</strong>: Diplomatic and political efforts to dissuade states from developing, acquiring, or maintaining WMD stockholds including chemical, biological, and nuclear weapons, e.g. NPT, CTBT, START</td>
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<td><strong>Counterproliferation</strong>: Military efforts to dissuade states from developing, acquiring, or maintaining WMD stockholds through the use of military force or technology, e.g. Stuxnet Virus, Osirak bombing</td>
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<td><strong>Horizontal Proliferation</strong>: The pursuit, acquisition, or development of nuclear weapons (or nuclear material) across current non-nuclear weapon states</td>
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<td><strong>Vertical Proliferation</strong>: The acquisition and build-up of more technically-advanced, reliable, or destructive nuclear weapons among existing nuclear weapon states</td>
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<td><strong>First Use Nuclear Doctrine</strong>: A state’s nuclear weapons policy that states they reserve the right to initiate nuclear attacks against other states</td>
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<td><strong>No First Use Nuclear Doctrine</strong>: A state’s nuclear weapons policy that states the only circumstances in which they will use nuclear weapons is for retaliation against a nuclear attack</td>
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2.1 Explanation 1: Security

**Main Idea:** More weapons make the world safer because the risk of war goes down.

The destructive potential of nuclear weapons, if used, is so catastrophic that no state wants to upset or provoke a nuclear weapon state to use them against them. As a result, states are more cautious towards nuclear weapon states and the risk of war goes down. Waltz says that if we get enough nuclear weapon states, everyone will balance each other or be cautious enough to make the likelihood of war very low. This is the *realist* explanation because it only focuses on states and ignores ideas, domestic politics, and other potential confounders.

Check your understanding with the following questions.

- If all states know nuclear weapons are so destructive, how do we know there’s a chance they’ll even be used?
- Why might more nuclear weapons not make the world safer?
- One critique of this argument is the *stability-instability* paradox which says that nuclear weapons make conventional war more likely because people know it won’t escalate to nuclear war. Do you agree?

2.2 Explanation 2: Domestic Politics

**Main Idea:** Powerful people within a country who stand to benefit from having a nuclear weapon successfully lobby their governments to develop them.

Governments are beholden to many important and powerful actors within a country like military officials and nuclear scientists. These actors have certain parochial interests in getting a nuclear weapons so they develop political connections and lobby their governments to pursue nuclear weapons.

Check your understanding with the following questions.

- Are decisions to launch nuclear weapons programs susceptible to powerful interests?
- Does this vary across democracies and dictatorships? Military juntas or civilian governments? Why or why not?
- Can you explain how the US’ Manhattan Project fit into each of these explanations?

2.3 Explanation 3: Norms

**Main Idea:** Having nuclear weapons signals something important to other states about your status, commitment, and capabilities.

Check your understanding with the following questions.

- Nina Tannenwald argues that there is, in fact, a “nuclear taboo” or moral opprobrium against the use of nuclear weapons. How does this contrast with the normative explanation? Do you agree with her argument?

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2 These questions don’t always have an easy yes or no answer.
3 How do States Use Nuclear Weapons?

- Deterrence
- Brinkmanship ("threats that leave something to chance")
- Compellence
- Limit escalation of war, e.g. Kargil War

4 How do States Regulate Nuclear Weapons?

States may self-regulate their use of nuclear weapons or sign onto international agreements. The latter is the norm. These regulation mechanisms are designed foremost to (1) prevent more countries from acquiring nuclear weapons, and (2) persuade states with nuclear weapons to reduce their arsenal.

The most famous international agreement regulating nuclear weapons is the Nuclear Non-Proliferation Treaty. The United States and the Soviet Union have signed several prominent bilateral nuclear agreements like the Comprehensive Test Ban Treaty (CTBT) and the Strategic Arms Reduction Treaties (START).

Main Regulation Mechanisms:

- Nonproliferation Agreements, e.g. the Humanitarian Initiative
- Disarmament and Arms Control Treaties, e.g. Iranian Nuclear Deal (JPOA)
- No First Use Doctrines
- Nuclear Weapon Free Zones
- Nuclear Non-Proliferation Treaty

4.1 Nuclear Non-Proliferation Treaty

Q. What are the three main points of the NPT?

- **Nonproliferation (Article I):** Nuclear-weapon states (NWS) agree not to transfer or assist states in acquiring nuclear weapons and non-nuclear weapon states (NNWS) agree not to manufacture nuclear weapons. To verify compliance, NNWS agree to monitoring by the IAEA.

- **Peaceful Use (Article IV):** All NPT members have the right to develop and use nuclear energy for peaceful purposes. Members agree to cooperate in furthering the development of nuclear weapons for peaceful purposes.

- **Disarmament (VI):** Each member agrees to pursue negotiations relating to the end of nuclear arms race and to nuclear disarmament

Q. How many states are signatories of the NPT?

188 UN Member States and observer parties.

Q. Who are some notable exceptions to the NPT?

India, Pakistan, and Israel have never signed the NPT. South Sudan has yet to sign it. North Korea withdrew from the NPT in 2003.

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3 The United State refuses to adopt a no first use doctrine in order to counter bunker busters and the threat of other WMDs. Pakistan also does not have a no first use doctrine; India and China, in contrast, do.