

bipolarity: a world order in which two states possess the preponderance of global military, economic, and diplomatic power. The Cold War, defined by great power rivalry between the United States and the Soviet Union, is a classic example. Some scholars argue that a bipolar world is more stable, with a smaller chance of major war, than other arrangements, such as unipolarity (in which there is a single superpower) and multipolarity (in which more than two states hold a critical mass of power).

centrifuge: a mechanical device used for nuclear enrichment. Nuclear centrifuges contain rotors that spin quickly to separate different forms of the radioactive element uranium. Low-enriched uranium (with a relatively low concentration of a certain form) can be used for nuclear power; highly enriched uranium is needed for nuclear weapons.

conventional weapons: weapons of warfare, ranging from rifles to missiles, other than nuclear, biological, and chemical weapons. The latter categories are called unconventional weapons, or weapons of mass destruction (WMD). They are not traditionally used in war, though the United States used two nuclear weapons at the end of World War II and other countries and non-state actors have occasionally used biological and chemical agents.

deterrence: a strategy used to discourage an enemy from attacking by threatening retaliation before the attack occurs. The possession of nuclear weapons is often considered a deterrent, especially if the weapons are physically capable of surviving an initial attack and being used to retaliate.

disarmament: the renunciation of given weapons, or all weapons, by states or other entities that possess them. One provision of the Nuclear Nonproliferation Treaty (NPT) calls for countries with nuclear weapons to take steps “in the direction of nuclear disarmament,” or the elimination of their nuclear arsenals. So far this has remained only an aspiration.

extended deterrence: a variant of deterrence in which a country uses its military capabilities to deter attacks not on itself, but on its allies. The United States has long exercised this strategy by promising to come to the aid of allies if

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they are attacked. This is called a security guarantee, or a nuclear umbrella since the U.S. force capable of responding to any attack includes nuclear weapons.

fissile material: material that can easily undergo nuclear fission—the splitting of nuclei when they are bombarded with neutrons—and then sustain a fission chain reaction. Certain types of uranium and plutonium are the fissile materials used in nuclear weapons and other nuclear technologies.

fuel cycle: the set of processes in which nuclear material is produced, used, and stored, whether for nuclear weapons or peaceful purposes. As generally used, the term encompasses uranium as well as plutonium, which can be reprocessed from uranium fuel.

horizontal proliferation: the spread of weapons or capabilities to countries or non-state actors that did not previously possess them. Though it can apply to a broad range of military equipment and technologies, the term most often refers to nuclear weapons.

intercontinental ballistic missile (ICBM): a type of ballistic missile, best known for its use in delivering nuclear warheads, with a range of several thousand miles, enough to fly from one continent to another.

multilateral: undertaken among three or more entities, usually countries. The term frequently describes organizations such as the United Nations (UN).

mutually assured destruction: the idea that two powerful countries with large nuclear arsenals would destroy each other completely in any nuclear conflict. This arose during the Cold War when the United States and the Soviet Union built a second strike capability, meaning that their nuclear arsenals were capable of surviving a first attack and then being used to destroy the attacking country in response.

no first use policy: a national policy not to use nuclear weapons unless the country is first attacked by an adversary using nuclear weapons. Both China and India maintain a no first use policy. The United States, along with

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Pakistan, Russia, the United Kingdom, and France, maintains the right of first use but has pledged to use nuclear weapons only in defense.

nuclear enrichment: a process, generally using centrifuges, by which uranium is processed into enriched uranium suitable for nuclear reactions. Low-enriched uranium can be used for nuclear power; highly enriched uranium is needed for nuclear weapons. The International Atomic Energy Agency (IAEA) attempts to monitor this process as part of its efforts to ensure that nuclear technology is limited to peaceful uses.

nuclear reactor: a container in which a controlled nuclear chain reaction can occur. Nuclear reactors form the core of nuclear power plants. Generally, the chain reaction heats water, creating steam that drives a turbine to generate electricity. However, other reactors are used to make radioactive material for medical use, research, or nuclear weapons.

Nuclear Suppliers Group (NSG): a group of countries that manufacture or otherwise supply materials and technologies needed for nuclear energy and that have agreed to certain safeguards and restrictions on their trade in these items. These measures, and other efforts undertaken by the NSG, aim to ensure that the items that NSG members supply do not contribute to the proliferation of nuclear weapons. Also called the London Club, the NSG was founded in 1975 and now has 48 member states.

party: in international diplomacy and law, a state that has ratified or acceded to a treaty and is bound by its provisions.

preemptive strike: an attack launched to prevent an enemy attack believed to be imminent. In the context of nonproliferation, a preemptive attack might aim to destroy nuclear weapons, missiles, or related items that the attacker believes are about to be used. This differs from a preventive strike, which also aims to destroy an adversary's weapons or equipment, but before their use is deemed imminent.

ratification: The act by a state of giving formal consent to abide by a treaty. Ratification occurs according to a state's own processes after a treaty is

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negotiated and signed. In the United States, the Senate decides whether to ratify treaties after the president signs them. Accession has the same effect as ratification but occurs when a state agrees to a treaty already negotiated and signed by others, and generally after the treaty has entered into force.

safeguard: in nonproliferation, an activity or process conducted by the International Atomic Energy Agency (IAEA) to verify that a country is not putting its nuclear program to military use. Safeguards aim to establish that countries are telling the truth when they report their nuclear activities to the IAEA. Inspections, surveillance cameras, and many other tools are part of this effort. All nonnuclear states that are parties to the NPT must sign safeguards agreements allowing the IAEA to monitor their nuclear programs; some have also signed Additional Protocols allowing more intensive steps.

sanction: a tool of statecraft, frequently involving economic measures such as asset freezes and trade restrictions, used to exact a certain behavior or outcome from another party. Sanctions have been used by the United States and other countries, both on their own and through the United Nations, in an attempt to curb the nuclear ambitions of North Korea and Iran.

Six Party Talks: a series of multilateral negotiations over North Korea's nuclear program, chaired by China and attended by Japan, North Korea, South Korea, Russia, and the United States. The talks began in 2003 as a result of North Korea's withdrawal from the Nuclear Nonproliferation Treaty. Six rounds of negotiations occurred, spanning more than five years and aimed at nuclear disarmament, trade normalization, and improved diplomatic relations. The talks came to a halt in 2009 when North Korea violated previous agreements by engaging in multiple nuclear and missile tests.

vertical proliferation: an increase in the amount or capabilities of a country's weapons or military technologies. Though it can apply to a broad range of military equipment and technologies, the term most often refers to nuclear weapons and their delivery systems, such as missiles. For example, vertical

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proliferation occurs when a nuclear-armed country develops more, or more powerful, nuclear weapons.