A. Ancient and medieval Efforts
   1. Disarmament Conference in Ancient China, 546 B.C.
   2. Peace of God, 989.
   5. Truce of God, 1063.
   8. The Church and the Crossbow, 1139.

B. Pre-World War II Efforts
   1. The Brussels Act of 1890
   4. The Hague Convention (IV) respecting the laws and customs of war on land, 1907.
   5. Convention relative to the laying of Automatic Submarine Contact Mines, October 18, 1907.
   6. The Covenant of the League of Nations, 1919 (article 8).
   8. Convention for the Control of the Trade in Arms and Ammunition, September 10, 1919.
   10. The Geneva Protocol Prohibiting the Use in War of Asphyxiating, Poisonous or other gases, and of Bacteriological method of Warfare, June 17, 1925.
   11. The Geneva Convention for the Supervision of the International Trade in Arms and Ammunition and in Implements of War, June 17, 1925.

C. Post World War II Agreements
   2. The Baruch Plan, June 14, 1946.
   7. Joint statement by the USA and the USSR of agreed principles for disarmament negotiations, 1961. Exchange of letters between the USA and USSR.
   8. Memorandum of Understanding between the USA and the USSR regarding the establishment of a direct communications link, 1963.
   10. Unilateral statements by the USA, the USSR and the United Kingdom regarding reduction of fissionable materials production: Address by President Johnson, Statement by Premier Khrushchev, Statement by Prime Minister Douglas-Mome, 1964.
   11. Treaty of principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies, 1967.
   15. Treaty on the prohibition of the emplacement of nuclear weapons and other weapons of mass destruction on the seabed and the ocean floor and in the subsoil thereof, 1971.
   16. Agreement between the USA and the USSR on measures to improve the direct communications link, 1971.
17. Agreement between the USA and the USSR on measures to reduce the risk of outbreak of nuclear war, 1971.
18. Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction, 1972.
19. Agreement between the USA and USSR on the prevention of incidents on and over the high seas, 1972.
20. Treaty between the USA and the USSR on the limitation of antiballistic missile systems (ABM Treaty), Agreed interpretations and unilateral statements, 1972.
21. Interim agreements between the USA and the USSR on certain measures with respect to the limitation of strategic offensive arms (SALT I Agreement), Protocol, Agreed interpretations and unilateral statements, 1972.
23. Agreement between the USA and the USSR on basic principles of negotiations on the further limitation of strategic offensive arms, 1973.
27. Joint statement by the USA and the USSR on strategic offensive arms (Vladivostok accord), 1974.
29. Agreement between the USA and the USSR amending the 1971 agreement on measures to improve the US-Soviet direct communications link, 1975.
33. Convention on the prohibition of military or any other hostile use of environmental modification techniques, understandings relating to the Convention, 1977.
34. Agreement between the UK and the USSR on the prevention of accidental nuclear war, 1977.
35. Protocol (I) additional to the Geneva Conventions of August 12, 1949, and relating to the protection of victims of international armed conflicts, 1977.
36. Statements by the USSR, the USA and the UK on security assurances, 1978.
38. Memorandum of understanding between the USA and the USSR regarding the establishment of a database on the numbers of strategic offensive arms, 1979.
39. Statement by the USA of data on the numbers of strategic offensive arms as of the date of signature of the SALT II Treaty, 1979.
40. Statement by the USSR of data on the numbers of strategic offensive arms as of the date of signature of the SALT II Treaty, 1979.
41. Joint statement by the USA and the USSR on principles and basic guidelines for subsequent negotiations on the limitation of strategic arms, 1979.
43. Agreement governing the activities of states on the moon and other celestial bodies, 1979.
44. Convention on the physical protection of nuclear material, 1980.
45. Convention on prohibitions or restrictions on the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects, Protocol (I) on nondetectable fragments, Protocol (II) on prohibitions or restrictions on the use of mines, booby-traps and other devices, Protocol (III) on prohibitions on restrictions on the use of incendiary weapons.
INTERNATIONAL RELATIONS

A. **ANNEXATION:** The acquisition of title to territory (scil. previously under the sovereignty of another State) by a unilateral act of appropriation by a conqueror State subsequent to subjugation: “Conquest along does not ipso facto make the conquering State the sovereign of the conquered territory. . . Conquest is only a mode of acquisition if the conqueror, after having firmly established the conquest, formally annexes the territory”: *I Oppenheim 566*-7. When, in June 1945, the Allies assumed “supreme authority with respect to Germany, including all the powers possessed by the German Government, High Command and any state, municipal, or local government or authority,” they expressly declared that the assumption of these powers “does not effect the annexation of Germany”: *I Whiteman 325*. While it is now accepted that the use of force, except in self-defense, is contrary to international law, it has been argued that nonetheless annexation after conquest may still be a valid method of acquiring title to territory*: *I O’Connell 508*. However, after the “Six Day War” in June 1967 when Israel invaded the Sinai Peninsula, the West Bank of the Jordan, the Golan Heights and the unoccupied parts of Jerusalem, the Security Council, in Resolution 242 (XXII), called for the “withdrawal of Israeli armed forces from territories occupied in the recent conflict” and emphasized “the inadmissibility of the acquisition of territory by war.” Cf. *debellatio*. In British constitutional law and practice, the term “annexation” is employed to conote the incorporation of territory within the dominion of the Crown, or within a particular part thereof, irrespective of its prior status. For a modern example, see the Island of Rockall Act 1982, under which, from February 10, 1972, “the Island of Rockall (of which possession was formally taken in the name of Her Majesty on September 18, 1955 in pursuance of a Royal Warrant dated September 14, 1955 addressed to the Captain of Her Majesty’s Ship Vidal) shall be incorporated into that part of the United Kingdom known as Scotland and shall form part of the District of Harris in the County of Inverness, and the law of Scotland shall apply accordingly.”

B. **Boycott:** As borrowed by the literature of international law, the notion of boycott “is really a modern form of reprisals whereby a State may institute by itself and through its nationals an interruption of commercial and financial relationships with another State. Opinion is divided as to whether, independently of any illegal acts committed by the state against whom the boycott is directed, it is a breach of public international law. It is at least an unfriendly act, but some writers go further and say that in some circumstances it may amount to an act of economic aggression which should be prohibited by law”: *Stone, Legal Controls of International Conflict (2nd Imp. revised), 291.*

C. **Blockade - Belligerent:** The blocking by a belligerent’s warships of the access to the enemy coast, or part of it, for the purpose of preventing entry and exit of vessels and cargo of all nations. Under the Declaration of Paris of 1856, in order to be legal and binding on neutrals, a blockade must be declared (that is, notified to all states) and effective (that is, maintained by a naval force capable of carrying out the purpose of the blockade). For example, the blockade of the Confederate coast by the Union in the American Civil War was not effective until the latter part of the war. A neutral blockade runner does not violate any laws of neutrality, nor does the blockade runner’s state permitting such conduct. On the other hand, a neutral merchant vessel trying to break through a blockade is liable to capture and condemnation by the captor’s prize court. Whether or not insurgents in a noninternational war can lawfully blockade the coast of the de jure government is a controversial issue, but the prevailing opinion is that they do have such a right if possessed of the status of belligerency.

**Significance** The institution of belligerent blockade can be traced to the sixteenth century. Originally it was directed only at ports and fortified owns along a coast; but by the time of the Napoleonic wars it was extended to include the entire enemy coast. With profound changed in the conditions and means of modern naval warfare in the two world wars, the traditional blockade maintained close to the coast (“close” blockade) lost its importance and was largely replaced by a long-distance blockade of all seaborne commerce of the enemy.

D. **Blockade - Long-Distance:** A belligerent blockade of the enemy’s coast which unlike an ordinary (“close”) blockade, is not maintained in the immediate vicinity of the enemy ports but covers large, virtually unlimited areas of the high seas and is designed to cut off the enemy’s territory completely and force economic isolation of the enemy. In a total war, the long-distance blockade represents a major tool for waging economic warfare by covering commerce with the enemy, passing not only directly to and from ports but also indirectly through neutral posts. Although in World War I neutral states questioned the legality of the long-distance blockade on the grounds that it extended to their coastlines and was in many respects ineffective, eventually opinion prevailed that such a blockade is lawful in modern conditions of warfare.

**Significance** The long-distance blockade was first instituted by Great Britain and its allies in 1915 by blockading Germany through ships operating more than one hundred nautical miles from German ports. Originally this blockade was declared to be only a reprisal in response to the German declaration that the waters around Great Britain were an operational war zone in which all enemy shipping would be attacked and even neutral vessels exposed to risks. However, the blockade soon became an explicit policy designed to prevent all passage to and from Germany by sea. Similar action was taken by France. The long-distance blockade was also instituted by the Allies against Germany in World War II. It resulted in a complex system of arrangements by the blockading nations, especially Great Britain, to discriminate between bona fide neutral commerce and commerce ultimately destined for, and originating in, Germany. It involved the introduction of the system of navicerts, certificates of origin and interest, “blacklists” of suspect neutral traders, and other elaborate devices to control neutral shipping.

E. **Embarago:** “This term of Spanish origin (from Spanish *embargar*, Late Latin *imbarricare* (barra = bar)... means detention, but in International law it has the technical meaning of detention of ships in port. Now, as by way of reprisal all acts, otherwise illegal, may be performed, there is no doubt that ships of the delinquent State may be prevented from leaving the ports of the inured States, for the purpose of compelling the delinquent State to make reparation for the wrong done. But the important point is to
distinguish embargo by way of reprisal from detention of ships for other reasons. (i) It was formerly the practice, when war seemed imminent, for each conflicting State to lay an embargo upon the merchant ships of the other in its ports, by way of anticipation and with a view to facilitating capture and condemnation in the event of war breaking out; but this practice is believed to be obsolete, even when the conflicting States are not parties to Hague Convention VI [of 1907 relative to the Status of Enemy Merchant Ships at the Outbreak of Hostilities (205 C.T.S. 305)]. (ii) Another kind of embargo is the so-called arrest de prince. And (iii) there is embargo arising out of the jus angariae [see angry]: II Oppenheim 141-2.

F. Intervention: In classical international law “Intervention is dictatorial interference by a State in the affairs of another State for the purpose of maintaining or altering the actual condition of things. Such intervention can take place by right or without a right, but it always concerns the external independence or the territorial or personal supremacy of the State concerned, and the whole matter is therefore of great importance for the international position of States. That intervention is, as a rule, forbidden by International Law, which protects the international personality of the States, there is no doubt. On the other hand there is just as little doubt that this rule has exceptions, for there are interventions which take place by right, and there are others which, although they do not take place by right, are nevertheless permitted by International Law”: I Oppenheim 305. It is submitted, however, the descriptions or definitions such as this, which appear to take no account at all of the legitimacy of war in at least some circumstances in classical international law, are inexact and uninformative. Few writers have attempted to relate intervention to war. But see Winfield in (1922-3) B.Y. I.L., 130 and also in (1924)5 B.Y.I.L. 149 (where he says “there is no real difference between war and external belligerent intervention.”)

The term or expression “intervention” has persisted into modern times, Art. 3 of the Draft Declaration on the Rights and Duties of States drafted by the ILC in 1949 thus declaring that “Every State has duty to refrain from intervention in the internal or external affairs of any other State”: (1949) I.L.C. Yearbook 287. Similarly, the Friendly Relations Declaration (G.A. Res. 2625 (XXV) enunciates and elaborates the principle concerning “[t]he duty not to intervene in matters within the domestic jurisdiction of any State, in accordance with the Charter.” “International law generally forbids such intervention, which in this particular connection means something more than mere interference and much stronger than mediation or diplomatic suggestion. To fall within the terms of the prohibition, it must generally speaking be in opposition to the will of the particular State affected, and almost always ... serving by design or implication to impair the political independence of that State. Anything which falls short of this is strictly speaking not intervention within the meaning of the prohibition under international law. The imperious type of diplomatic intervention just described differs fundamentally from other more active kinds of interference in the internal or external affairs of another State, which are commonly grouped under the expression “intervention”, and which may go as far as to include military measures. It is possible to distinguish three kinds of active, material intervention which, unlike the type first mentioned, do not have the character of a diplomatic demarche: (‘Internal’ Intervention - An example is State A interfering between the disputing sections of State B in favour either of the legitimate Government or of the insurgents. (2) ‘External’ Intervention - An example is State A interfering in the relations - generally the hostile relations of other States, as when Italy entered the Second World War on the side of Germany, and against Great Britain. (3) ‘Punitive’ Intervention - This is the case of a reprisal, short of war, for an injury suffered at the hands of another State; for example, a pacific blockage instituted against this State in retaliation for a gross breach of treaty”: Starke, An Introduction to International law (7th ed.), 110-1.

Writers who retain the term maintain the existence of a right of intervention under international law in certain cases and notably (a) on a collective basis pursuant to the Charter of the UN in the shape of “preventive or enforcement action” under Chapter VII; (b) for the protection of nationals abroad; (c) in self-defense; (d) for the repression of a gross breach of international law (such as intervention of an improper sort by the State intervened against): cf. Starke, op. cit., 111-2. But the legality of, for instance, intervention for the protection of nationals abroad must, in the light of the Kellogg-Briand Pact and of the provisions of the UN Charter, especially art. 2(4), today be considered to be very doubtful. See Brownlie, International law and the Use of Force by States, 298-301. More generally the conception of a “right” to intervention in any circumstances may be criticized as confused: That which is done as a right cannot be construed to involve any infringement on the liberty of action of another.

Art. 2(7) of the UN Charter lays it down that “Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any State ... but this principle shall not prejudice the application of enforcement measures under Chapter VII.” This provision is regarded as not operating to “exclude action, short of dictatorial interference, undertaken with a view to implementing the purposes of the Charter. This with regard to the protection of human rights and freedoms ... the prohibition of intervention does not preclude study, discussion, investigation and recommendation on the part of the various organs of the United Nations”: I Oppenheim, 320. For a comprehensive discussion of this and opposed view of the matter see Rajan, United Nations and Domestic Jurisdiction, 86-102, 473-83. And see Goodrich, Hambro and Simons, The Charter of the United Nations (3rd ed.), 67-8.

G. Repatriation: This term is employed in the laws of war to denote the return of some person to his own country. Thus, States are obliged to repatriate seriously wounded or seriously sick prisoners of war during a conflict, and to release and repatriate all prisoners of war after the cessation of hostilities (arts. 109 and 118 of the Geneva Convention (III) Relative to the Treatment of Prisoners of War of August 12, 1949 (75 U.N.T.S. 135). Likewise, protected persons are to be repatriated unless their departure would be contrary to the national interests of the State (art. 35 of the Geneva Convention (IV) Relative to the Protection of Civilian Persons in the Time of War of August 12, 1949 (75 U.N.T.S. 287). See prisoners of war.

H. Sanctions: “Sanctions are measures taken in support of law. It is of the essence of law that sanctions are applied with and by the general authority, not by any individual. With the substitution of the word ‘state’ for the word ‘individual’, this is true in
principle, and ought to be true in fact, of the sanctions of international, as well as of national law... Not all sanctions are punitive; some are preventive": Royal Institute of International Affairs, International Sanctions (1938), 5. “The sanctions of international law appear to be a mixture, in proportions varying according to the circumstances, of the forces of public opinion, habit, good faith, the possibility of self-help, expediency, and the combination of reciprocal advantage when the law is followed and fear of retaliation when it is broken”: Bishop, International Law (3rd ed.), 10. The UN Charter arts. 41 (measures not involving armed force, including interruption of economic relations and communications and severance of diplomatic relations) and 42 (“such action by air, sea or land forces as may be necessary”) provide for the application by the Security Council of sanctions against a State guilty of a threat to the peace, breach of the peace or an act of aggression: such are generally referred to as collective sanctions: see peace, threat to; breach of.

**TYPES AND QUANTITIES OF ARMAMENTS**

1. **What are the main types of armaments?**
   Modern armaments can be broadly classified as nuclear weapons, other weapons of mass destruction (such as biological and chemical weapons) and conventional weapons.

2. **What is a nuclear weapon?**
   A nuclear weapon is not just a bigger and more destructive version of a conventional weapons, but an entirely different type of weapon. The energy released by a nuclear weapon originates in the nucleus of the atom, by means of its fission or fusion, in a fraction of a second. Such an explosion creates tremendous devastation by shock waves and blast, by heat and ire and by immediate delayed radiation. Today’s technology, it is indeed possible to release more energy by one weapon in one microsecond than form all conventional weapons used in all wars in history.

3. **How large is the world stock of nuclear weapons?**
   It has been estimated that there are over 50,000 nuclear warheads in the world of which approximately one half are strategic weapons. The total yield (i.e. explosive power) of the world stock of nuclear weapons, amounting to some 15,000 megatons, is equivalent to more than one million Hiroshima bombs, which had a yield of 13 kilotons. (A kiloton is equal to 1,000 tons of conventional high explosive or TNT; a megaton is equal to 1,000,000 tons of TNT).

4. **What does “nuclear-weapon system” mean?**
   The term “nuclear-weapon system” applies to both the delivery vehicle and its nuclear payload (warheads or bombs). The delivery vehicle can be land-based, sea-based or airborne. While there is no clear borderline between them, it is common practice to regard nuclear-weapon systems as strategic if they have a range of above 5,500 km; intermediate-range or medium-range, between 1,000 and 5,500 km; shorter-range, between 500 and 1,000 km; short-range, under 500 km; or tactical if they are intended for battlefield use.

5. **What are chemical and biological weapons?**
   There is a broad range of chemical agents which can easily be produced and stockpiled in the form of weapons. The most lethal are nerve gases, which can cause almost instantaneous death; the least lethal are incapacitating agents such as tear gases. Binary weapons are a particular type of chemical weapon, which consists of two chemical agents that are not highly toxic independently but which become so upon impact. Unlike chemical weapons, biological weapons are based on microbial or other living organisms or toxins, whatever the origin. The use of both chemical weapons and bacteriological methods of warfare was banned by the Geneva Protocol of 1925. A further step, for biological weapons, was taken by the Convention on the Prohibition of the Development, Production and stockpiling of bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed in 1972. A convention is now being negotiated to ban the development, production, stockpiling and destruction of all types of chemical weapons as well as reaffirming the 1925 ban on their use.

6. **What are the main types of conventional weapons?**
   The category of conventional weapons includes all weapons other than weapons of mass destruction. A general definition embraces the traditional weapons based on land, sea and in the air by armies, navies and air forces. Land-based weapons range from individual soldiers’ rifles to artillery guns and rockets, tanks and other armored vehicles. Sea-based weapons are deployed on ships such as frigates, destroyers, cruisers and aircraft carriers, or on submarines. Aircraft range from small fighter planes to large bombers, and include fighter bombers, helicopters and reconnaissance planes. New types of conventional weapons are being produced which incorporate highly sophisticated technologies and which have an unprecedented degree of accuracy and effectiveness in reaching and destroying their targets. These include short-range attack missiles (SRMs) with conventional explosive warheads.
1. ARMS CONTROL: Internationally agreed or unilateral measures that limit or otherwise govern the numbers, types, development, deployment and acquisition of armaments, armed forces and/or other supporting activities. The term is more often used in the literature of Western countries.

2. ARMS LIMITATION: Internationally agreed or unilateral measures that quantitatively and qualitatively restrict armaments, armed forces and other supporting activities. The term is more often used in the literature of Eastern European, non-aligned and neutral countries.

3. ARMS REGULATION, REGULATION OF ARMAMENTS: Measures to restrict armaments and armed forces. “Regulation of armaments” is the term used in the charter of the United Nations to indicate treaty measures for arms control or arms limitation.

4. ASSURED DESTRUCTION: The ability to retaliate an attack by utterly destroying an adversary during a nuclear exchange, even after absorbing a first nuclear strike. See also: First strike, Mutual assured destruction.

5. COUNTERFORCE: The employment of strategic forces to destroy or render impotent the military capabilities of an enemy force. A counterforce strategy specifies the targeting of armed forces, generally nuclear forces, of an enemy.

6. DÉTENTE: Lessening of tensions in international relations.

7. DETERRENCE: A strategic concept that holds that a potential adversary will be dissuaded from attacking if presented with the certainty of military retaliation that would entail unacceptable damage. The term is most frequently used in the context of nuclear deterrence. The overall philosophy under which military doctrines in the nuclear age have been developed is the “theory of deterrence.” While the original interpretation of deterrence was based on the notion that a possible attack would be deterred precisely because of the threat that the other side would retaliate with nuclear weapons, today the argument is that a nuclear war would be so devastating that this in itself deters any possible use of such weapons. In simplified terms, the difference between the two interpretations is that in the first case it is the threat of use of nuclear weapons that acts as a deterrent; in the latter it is the threat of mutual devastation. See also: Second strike.

8. DISARMAMENT: The popular, general term, widely used in the United Nations and elsewhere to embrace all aspects of the overall subject of arms regulation (as used in the Charter of the United Nations), including arms control or arms limitation, as well as the actual reduction or elimination of armaments or military forces (true disarmament) as a result of international agreement or unilateral measures. See also: General and complete disarmament.

9. FIRST STRIKE: An attack, sometimes called a “disarming attack,” designed to destroy an opponent’s nuclear forces before he can strike back. See also: Second strike.

10. FLEXIBLE RESPONSE: A strategy, formulated by NATO, based on the military capability to react effectively in a conflict situation by using whatever means are necessary, i.e. conventional weapons and, if deemed necessary, nuclear weapons.

11. MUTUAL ASSURED DESTRUCTION (MAD): The ability of both sides in a nuclear exchange to launch a retaliatory strike capable of inflicting assured destruction on the opponent. See also: Deterrence.

12. NATO (NORTH ATLANTIC TREATY ORGANIZATION): The North Atlantic Treaty was signed in Washington in April 1949. The 16 members of the alliance are: Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom and the United States. In 1966 France withdrew from the integrated military structure of the Organization. Members of the alliance pledge to maintain peace, uphold the Charter of the United Nations, promote conditions of stability and well-being, and encourage economic collaboration. An attack on one of them is regarded as an attack on all.

13. NEUTRALITY: A term which, in international law, refers to a neutral State’s rights and duties with regard to belligerents in times of war between other States. The belligerents have a duty to respect a neutral State’s territorial integrity. A neutral State has a duty to remain militarily impartial in the conflict, and it must also protect its territory against being used by the belligerents for acts of war. A policy of neutrality generally refers to a State’s policy, in peacetime, of military non-involvement with other States or with military alliances, indicating its intention to stay out of a possible future war between them, i.e. to remain neutral under international law.

14. NON-ALIGNMENT: The political option of a large group of States, which does not associate or identify itself with the political, ideological or military objectives in international affairs espoused by any other particular group of States organized in an alliance. It does not preclude involvement with a particular policy, State or bloc, but implies an attitude of no pre-commitment before a situation arises. The basic principles of the non-alignment were formulated and adopted by the 25 founding members of the movement at the first Summit Meeting, held in September 1961 in Belgrade, Yugoslavia. The sixth Summit Meeting, held in September 1986 at Harare, Zimbabwe, was attended by over 90 States.

15. NON-FIRST USE: Renunciation of the option of the initial use of specific military actions in armed conflict. It most frequently refers to renunciation of the first use of specific military actions in armed conflict. It most frequently refers to renunciation of the first use of nuclear weapons.

16. NUCLEAR-WEAPON STATE: A State which has nationally developed an/or is in possession of its own nuclear weapons. The non-proliferation treaty states that, for its purposes, a nuclear-weapon State is one which manufactured and exploded a
nuclear weapon or other nuclear explosive device prior to January 1, 1967. The current nuclear-weapons States are: China, France, USSR, United Kingdom and United States. See also: NPT.

17. **NUCLEAR FREEZE**: A freeze applied to existing nuclear weapons and forces calls for a (mutual and verifiable) halt to the production, testing and deployment of nuclear weapons and their means of delivery. Proponents of the freeze concept regard it as a necessary first step towards limited the nuclear arms race. See also: Freeze.

18. **SECOND STRIKE**: A retaliatory nuclear attack in response to a first strike. A second-strike capability, i.e. the ability to respond to a first nuclear strike with nuclear retaliation causing unacceptable damage to the attacker, is the essence of the doctrine of nuclear deterrence. See also: Deterrence, Mutual assured destruction.

19. **STRATEGIC DEFENSE INITIATIVE (SDI)**: A major, United States research programme on advance land- and space-based anti-ballistic missile technologies. These technologies include kinetic energy interceptors (advanced missiles, etc.) and directed energy systems (which react at the speed of light). Advance surveillance, tracking and command and control systems must also be part of an overall system. Both the degree of feasibility of implementation, its cost-effectiveness and its possible effect on discussions on strategic strategic stability are points of continuing divergence among experts.

20. **WARSAW TREATY**: The Treaty of Friendship, Co-operation and Mutual Assistance was signed in May 1955 in Warsaw, Poland, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the USSR are the member States of the Treaty. It establishes a multilateral political and military organization which binds its parties to refrain in their international relations from the threat or use of force and to settle their international disputes by peaceful means, in accordance with the Charter of the United Nations. The Treaty calls for immediate consultations among its parties, in the interest of their joint defense, whenever the threat of an armed attack on any of them arises. In the event of an armed attack in Europe on one or several of the States parties by an State or group of States it provides for immediate assistance, including the use of armed force.

21. **ANTARCTIC TREATY**: The Treaty, which was opened for signature on December 1, 1959 and entered into force on June 23, 1961, establishes Antarctica as a demilitarized zone. The region thus became the first nuclear-weapon-free zone on the planet. The Treaty prohibits any type of military activity including the testing of any kind of weapons, any nuclear explosions and the disposal of radioactive waste in the Antarctic region.

22. **BIOLOGICAL WEAPONS CONVENTION** - (CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN WEAPONS AND ON THEIR DESTRUCTION - BW CONVENTION): The Convention was opened for signature on April 10, 1972 and entered into force on May 26, 1975. It is the first multilateral agreement that provided for a genuine measure of disarmament, in the sense that it not only prohibits development, production, stockpiling or acquisition of biological (bacteriological) agents or toxins and of weapons and means of delivery for such agents for hostile purposes, but also mandates their destruction or conversion to peaceful purposes. It complements the 1925 Geneva Protocol, which prohibits the use of chemical and bacteriological methods of warfare. See also: Geneva Protocol.

23. **COMPREHENSIVE TEST BAN (CTB)**: The prohibition of nuclear testing in all environments, including underground. The conclusion of an agreement prohibiting all nuclear testing is seen by many States as the most important measure that could be taken towards ending the nuclear arms race, particularly in its qualitative aspects. See also: Partial test-ban treaty.

24. **CONFIDENCE-BUILDING MEASURES**: Measures, mainly relating to military matters, designed to contribute to the development of trust and more stable relations between States, thus facilitating the process of arms regulation and disarmament and strengthening the security of States. Prior notification of certain military maneuvers and the exchange of observers at such maneuvers are examples of confidence-building measures. See also: Conference on Security and Cooperation in Europe, Stockholm Conference.

25. **CONVENTION ON PROHIBITIONS OR RESTRICTIONS ON THE USE OF CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS (INHUMANE WEAPONS CONVENTION)**: The Convention was opened for signature on April 10, 1981 and entered into force on December 2, 1983. In its three Protocols, the Convention prohibits or restricts the use of any weapons that have excessively cruel, injurious or indiscriminate effects, such as certain fragmentation weapons, mines, incendiary weapons, booby traps and similar devices. See also: Napalm.

26. **GENEVA PROTOCOL** - (PROTOCOL FOR THE PROHIBITION OF THE USE IN WAR OF ASPHYXIATING, POISONOUS OR OTHER GASES, AND OF BACTERIOLOGICAL METHODS OF WARFARE): The Protocol was signed June 17, 1925. It prohibits the use in war of asphyxiating, poisonous or other gases and of bacteriological methods of warfare. It does not forbid, however, the development, production, stockpiling or deployment of chemical or biological weapons, nor does it provide for mechanisms and procedures in case of violation.

27. **INF TREATY** - (TREATY BETWEEN THE UNITED STATES OF AMERICAN AND THE UNION OF SOVIET SOCIALIST REPUBLICS ON THE ELIMINATION OF THEIR INTERMEDIATE-RANGE AND SHORTER-RANGE MISSILES): The Treaty was signed on December 8, 1987 and entered into force on June 1, 1988. It is the first agreement ever to provide for nuclear disarmament. Under it the parties agree to eliminate all their ground-launched intermediate-range (1,000 - 5,500 km) and shorter-range (500 - 1,000 km) missiles, their launchers and all their support equipment in a specified period of time. The Treaty builds upon verification arrangements previously agreed between the
two sides, and also adds important new forms. It provides for a verification triad with on-site inspection, inspection by challenge and national technical means of verification (satellite observation).

28. **NPT - (TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS):** The Treaty was opened for signature of July 1, 1968 and entered into force on March 5, 1970. It aims at preventing the spread of nuclear weapons from nuclear-weapon States to non-nuclear weapons States, and promoting the process of nuclear disarmament and at facilitating access to nuclear technology for peaceful purposes. The Treaty defines the obligations of both nuclear-weapon and non-nuclear weapon States parties regarding the prevention of the further spread of nuclear weapons. It further commits both nuclear-weapons and non-nuclear weapon States parties regarding the prevention of the further spread of nuclear weapons. It further commits both nuclear-weapon and non-nuclear-weapon. It further negotiations, in good faith, on nuclear disarmament and the cessation of the nuclear arms race. The Treaty also provides for safeguards to be administered by IAEA to prevent diversion of nuclear material from peaceful to weapons uses. See also: IAEA, Safeguards.

29. **PARTIAL TEST-BAN TREATY - (TREATY BANNING NUCLEAR WEAPONS TESTS IN THE ATMOSPHERE, IN OUTER SPACE AND UNDER WATER):** The Treaty was signed on August 5, 1963 and entered into force on October 10 of that year. It prohibits all nuclear explosions, military or peaceful, in the atmosphere, in outer space and under water where an explosion could cause radioactive debris to be present outside the territory of the country conducting it. However, it does not cover underground testing with is why the Treaty is colloquially known as the “Partial” test-ban Treaty. See also: Comprehensive test ban, Threshold test-ban Treaty; Peaceful nuclear explosions Treaty.

30. **PEACE-KEEPING OR PEACE-KEEPING FORCE:** The interposition, in conditions of a truce between parties to armed conflict or potential armed conflict, of specialized military personnel from third parties to control areas of separation between the parties, to oversee the preservation of the truce agreement and to offer other stabilizing assistance. Peace-keeping can only be effected with the consent of the belligerent parties. A peace-keeping force is usually of an international character, normally established by the united nations and operating under its responsibility.

31. **FREEZE:** The concept of limiting forces, armaments or expenditures to current levels or those existing at a specific date. See also: Nuclear freeze.

32. **VERIFICATION:** Verification is a process which serves to provide confidence that the provisions of an agreement are being observed, primarily through the parties’ ability to detect violations of its terms. Verification can also serve to build domestic and international confidence in the viability of arms limitations and disarmament agreements.

33. **NUCLEAR-WEAPON-FREE ZONES:** Areas in which the production and/or stationing of nuclear weapons are prohibited by agreement between the States of the zone. Conditions may vary for individual zones but usually include a provision that the nuclear-weapon States undertake not to use or threaten to use nuclear weapons against countries of the zone. While a number of proposals for the creation of nuclear-weapon-free zones have been put forward, the first nuclear-weapons-free zone in a densely populated area has been established in Latin America by the 1967 Tlatelolco Treaty. Although not consisting of independent States the Antarctic is also, by virtue of the demilitarization provisions of the Antarctic is also, by virtue nuclear-weapons-free zone. A large nuclear-free zone was established in the South Pacific through the 1986 Rarotonga Treaty. See also: Antarctic Treaty, Rarotonga Treaty, Tlatelolco Treaty, Security assurances.

34. **ON-SITE INSPECTION:** Examination of an area by outside inspectors to maintain confidence that the provisions of a treaty are being adhered to or to determine whether a violation of a treaty has occurred or is occurring in a suspected area. See also: Verification.

35. **OUTER SPACE TREATY - (TREATY ON PRINCIPLES GOVERNING THE ACTIVITIES OF STATES IN THE EXPLORATION AND USE OF OUTER SPACE, INCLUDING THE MOON AND OTHER CELESTIAL BODIES):** The Treaty was opened for signature on January 27, 1967 and entered into force on October 10, 1967. It prohibits placing any object carrying nuclear weapons or any other kind of weapons of mass destruction in orbit around Earth, or stationing them in outer space or on celestial bodies. It also forbids the establishment of military bases, installations and fortifications, or the testing of any kind of weapon on celestial bodies.

**HOW SYSTEMS WORK**

One of the originators of systems theory, Morton Kaplan, identified six different systems. Two, the “balance of power” and the “loose bipolar” systems, were based on historical observation. The other four, “tight bipolar,” “universal,” “hierarchy,” and “unit veto” systems, were hypothetical, or possible, systems. Other political scientists have formulated different sets of systems, but Kaplan’s work remains a classic. to explore both the different types of systems and how they operate, we will briefly examine Kaplan’s ideas. All six systems will be defined and the “rules of the game” in each.

1. **Balance-of-power system.** Kaplan defines this system as one in which there are five or more major actors. Historically it closely resembles the system of Great Britain, France, Germany, Russia, Austria-Hungary, and, to a lesser degree, Italy and Turkey, which existed in Europe in the 1800s. It is a relatively fluid and competitive system in which the countries involved form shifting alliances. All are interested in their own benefit and are primarily responsible for their own protection. Since too much strength for any one actor or even any one alliance would threaten all the other actors, there is a tendency to form counteralliances and to try to win allies away from the predominant coalition. The rules of the game for each actor are:
1. Increase power, but do so by negotiations rather than by fighting.
2. Fight rather than fail to increase power.
3. If fighting, stop short of destabilizing the system by destroying another major actor.
4. Oppose any actor or alliance that threatens to upset the balance by becoming preponderant.
5. Restrain (revolutionary) actors that do not subscribe to the system and do not play by the rule of the game.
6. Permit defeated major actors to maintain their status or, if a major actor is eliminated, find a new actor to take its place in order to maintain the potential for balance in the system.

2. **Loose bipolar system.** The rules of the loose bipolar system are as follows:
   1. All blocs subscribing to hierarchical or mixed hierarchical integrating principles are to eliminate the rival bloc.
   2. All blocs subscribing to hierarchical or mixed hierarchical integrating principles are to negotiate rather than to fight, to fight minor wars rather than major wars, and to fight major wars - under given risk and cost factors - rather than to fail to eliminate the rival bloc.
   3. All bloc actors are to increase their capabilities relative to those of the opposing bloc.
   4. All bloc actors are to increase their capabilities relative to those of the opposing bloc.
   5. All bloc actors are to engage in major war rather than to permit the rival bloc to attain a position of preponderant strength.
   6. All bloc members are to subordinate objectives of the universal actor to the objectives of their bloc in the event of gross conflict between these objectives but to subordinate the objectives of the rival bloc to those of the universal actor.
   7. All non-bloc member national actors are to coordinate their national objectives with those of the universal actor and to attempt to subordinate the objectives of bloc actors to those of the universal actor.
   8. Bloc actors are to attempt to extend the membership of their bloc but to tolerate the non-member position of a given national actor if the alternative is to force that national actor to join the rival bloc or to support its objectives.
   9. Non-bloc member national actors are to act to reduce the danger of war between the bloc actors.
   10. Non-bloc members are to refuse to support the policies of one bloc actor as against the other except in their roles as members of a universal bloc.
   11. Universal actors are to reduce the incompatibility between the blocs.
   12. Universal actors are to mobilize non-bloc member national actors against cases of gross deviation, e.g., resort to force by a bloc actor. This rule, unless counterbalanced by the other rules, would enable the universal actor to become the prototype of a universal international system.

Unlike the “balance of power” international system, there is a high degree of role differentiation in the loose bipolar system. If any of the roles is pursued to the exclusion of others, the system will be transformed. If one bloc actor eliminates another, the system may be transformed into a hierarchical system. If the universal actor performs its functions too well, the system may be transformed into a universal international system. Other variations are possible.

The consequences of the loose bipolar system are as follows. Alliances tend to be long-term, to be based on permanent and not on shifting interests, and to have ideological components. Wars, except for the fear of nuclear, would tend to be unlimited. However, the fears concerning nuclear escalation are so great that there is, in fact, a greater dampening of war than in the “balance of power” system. Thus, wars tend to be quite limited; and even limited wars are rare. In the field of law, there are fewer restrictions on intervention than in the “balance of power” system and the limitations which do exist stem largely from the fear of escalation. The universal organization is used primarily for mediation and to some extend for war dampening.

3. **Tight Bipolar System.** The tight bipolar international system represents a modification of the loose bipolar system in which non-bloc member actors and universal actors disappear entirely or cease to be significant. Unless both blocs are hierarchically organized, however, the system will tend toward instability.

4. **Universal System.** The universal international system might develop as a consequence of the functioning of a universal actor organization in a loose bipolar system. The universal system, as distinguished from those international systems previously discussed, would have a political system as a subsystem of the international social system. However, it is possible that this political system would be of the confederated type, i.e., that is would operate on territorial governments rather than directly on human individuals.

The universal international system would be an integrated and solidarity system. Although informal political groupings might take place within the system, conflicts of interest would be settled according to the political rules of the system. Moreover to a body of political officials and administrators would exist whose primary loyalty would be to the international system itself rather than to any territorial sub-system of the international system.

Whether or not the universal international system is a stable system depends upon the extend to which it has direct access to resources and facilities and upon the ratio between its capabilities and the capabilities of the national actors who are members of the system.
5. **Hierarchical System.** The hierarchical international system may be democratic or authoritarian in form. If it evolves from a universal international system - perhaps because the satisfactions arising from the successful operation of such a universal international system lead to a desire for an even more integrated and solidarity international system - it is likely to be a democratic system. If, on the other hand, the hierarchical system is imposed upon willing national actors by a victorious or powerful bloc, then the international system is likely to be authoritarian.

The hierarchical system contains a political system. Within it, functional lines of organization are stronger than geographical lines. This highly integrated characteristic of the hierarchical international system makes for greater stability. Functional cross-cutting makes it most difficult to organize successfully against the international system or to withdraw from it. Even if the constitution of the system were to permit such withdrawal, the integration of facilities over time would raise the costs of withdrawal too high.

6. **Unit Veto System.** Consider a world in which some twenty-odd nations have nuclear systems capable of a not incredible first strike. That is, each nation would have a nuclear system that would not completely reduce enemy forces in a first strike but that might nonetheless reduce the enemy forces so much, if everything went according to plan, that a war begun by a first strike might be contemplated. However, even a successful first strike would than leave a national launching such an attack, because of its depleted arsenal, quite vulnerable to attack by a third nation - an attack that might not be unlikely either if its own attack had been without provocation or if the other nation were malevolent. In any event, the vulnerability of the attacker to subsequent attack by a third state would tend to inhibit such a first strike except in the most extremely provocative circumstances.

There would be little need for specific alliances in this world. To the extent that alliances did occur, one would expect them to be of a non-ideological nature. Nations might ally themselves in pacts establishing an obligation to retaliate against any “aggressor” who launched a nuclear attack, which exceeded certain specified proportions, against an alliance member.

In this system one does not expect large counter-value or counter-force wars. If nuclear weapons are used at all, they will tend to be used in limited retaliations for purposes of warning or in other strictly limited ways. The wars that do occur will tend to be non-nuclear and limited in geographic area and means of war-fighting. Sub-limited wars will occur more often than actual wars.

The system, however, might seem to have some potentiality for triggering wars or for catalytic wars. That is, if one nation engages in a counter-force attack, this in some views would likely trigger an attack on it by a third state. Or an anonymous attack or accident might catalyze a series of wars. These possibilities cannot be denied, particularly if tensions within the system become high. Nonetheless first strikes and accidental wars are unlikely because credible first-strike forces will not exist and because adequate command and control systems will be available. This the nuclear systems will be relatively stable against accidents. An anonymous attack will be a theoretical possibility but no a practicable on unless many nations develop polaris forces - that is, forces such that an attack cannot be attributed to a particular nation. Even so, it would seem difficult to identify the rational motive for attack in such a world. An anonymous attack would not seem to have any reasonable political motive, since, by definition, the aggressor could not identify himself and thus secure the benefits arising from threats. Numerous nervous rivals would remain, and the attack might very well trigger a holocaust.

Because of the adequacy of nuclear systems and the relative unimportance of alliances, when contrasted with the “balance of power” international system, interventions would not be as ominous as in that system and therefore would not be as strongly interdicted. But since the gains resulting from such interventions would be smaller than in the loose bipolar system they are unlikely to become characteristic of this system. The danger of escalation, moreover, would tend to limit them. If universal organizations exist in this system, they would act as mediators, as would non-involved states whether nuclear or non-nuclear. In general, though, the universal organization would have fewer and less important functions than in the loose bipolar system. Nations equipped with nuclear forces in the unit veto system will tend to be self-sufficient and to reject outside pressures, even in coming from universal organizations. In particular, the functions of the universal organization dealing with political change will tend to be minimized. This will be reinforced by the disappearance of the colonial question as an important issue in world politics.

The foreign policies of the great nuclear powers will tend to be isolationist. Alliances, as specified, will recede in importance. Hegemonial ambitions will be curbed - primarily by an obvious inability to achieve them. Protective functions will tend to be shifted to “other” shoulders, when aggression does occur, since no “natural” assignment of this function will be possible. (That is, almost any one of the nuclear powers could play the role; there is no particular pressure on any particular nation to assume it).

One would expect nations such as the Soviet Union and China to be less revolutionary, as the prospects for revolutionary solidarity receded even further, and as the friction between nuclear powers, regardless of ideology, increased. As a consequence nations such as the United States would have less incentive to resist changes in the status quo.

The domestic corollary of the above would involve publics suspicious of foreign nations, relatively uninterested in the morals of quarrels or in social change external to the nation, and lacking the assurance necessary for an articulated goal-oriented foreign policy. . . .
### FIVE OBJECTIVES OF NEGOTIATION

<table>
<thead>
<tr>
<th>Subject of Negotiation:</th>
<th>Extension Agreement</th>
<th>Normalization Agreement</th>
<th>Redistribution Agreement</th>
<th>Innovation Agreement</th>
<th>Side-Effects</th>
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</thead>
<tbody>
<tr>
<td>Continuation of Normal (renewals or Replacements)</td>
<td>Termination of abnormal (cease-fire, truce, resumption of diplomatic relations)</td>
<td>New distribution in favor of offensive side (surrender of territory, liberation of colonies)</td>
<td>New institutions or other arrangements of mutual interest.</td>
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<tr>
<td>Main characteristics of negotiating process:</td>
<td>Strong influence of previous agreement: as a precedent, and in limiting area of dispute.</td>
<td>Strong influence of situation at time of negotiations. Domestic or third party pressures toward normalization.</td>
<td>Continuous division between offensive and defensive side. Continuous open threat of offensive side.</td>
<td>Inducement of mutual benefits, and risk of exclusion. A specially interested party may act as initiator.</td>
<td>The less likely the agreements, the more important the side effects.</td>
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<td>In case of prolonged negotiations:</td>
<td>Both sides lose.</td>
<td>In case of continuing hostilities, stronger party may win by force instead of negotiation.</td>
<td>Defensive side postpones loss, but redistribution may begin to look like normalization.</td>
<td>Interest in innovation may shift from one side to the other.</td>
<td>Side effects continue to flow from negotiating process.</td>
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<tr>
<td>In case of no agreement:</td>
<td>Interruption of customary arrangements.</td>
<td>Either continuation of fighting (or of abnormal relations) or subsiding of fighting (tacit truce).</td>
<td>Either status quo or implementation of threat by offensive side.</td>
<td>Continuation of status quo.</td>
<td>Side effects nonetheless materialize and may be used to vindicate negotiation.</td>
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