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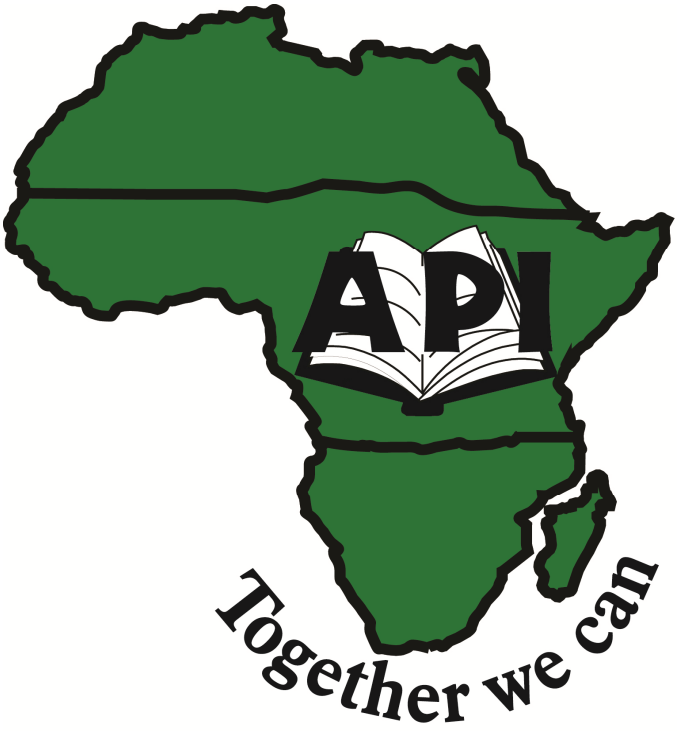

INTERNATIONAL RELATIONS MANAGEMENT TERM TWO STUDENT'S MODULES (IRM)

Contents

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Course Name: International trade and trade policies

International trade is exchange of capital, goods, and services across international borders or territorie In most countries, it represents a significant share of gross domestic product (GDP). While international trade has been present throughout much of history (see Silk Road, Amber Road), its economic, social, and political importance has been on the rise in recent centuries. Industrialization, advanced transportation, globalization, multinational corporations, and outsourcing are all having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization. International trade is a major source of economic revenue for any nation that is considered a world power. Without international trade, nations would be limited to the goods and services produced within their own borders.

International trade is in principle not different from domestic trade as the motivation and the behavior of parties involved in a trade does not change fundamentally depending on whether trade is across a border or not. The main difference is that international trade is typically more costly than domestic trade. The reason is that a border typically imposes additional costs such as tariffs, time costs due to border delays and costs associated with country differences such as language, the legal system or a different culture.

International trade uses a variety of currencies, the most important of which are held as foreign reserves by governments and central banks. Here the percentage of global cumulative reserves held for each currency between 1995 and 2005 are shown: the US dollar is the most sought-after currency, with the Euro in strong demand as well.

Another difference between domestic and international trade is that factors of production such as capital and labor are typically more mobile within a country than across countries. Thus international trade is mostly restricted to trade in goods and services, and only to a lesser extent to trade in capital, labor or other factors of production. Then trade in goods and services can serve as a substitute for trade in factors of production. Instead of importing the factor of production a country can import goods that make intensive use of the factor of production and are thus embodying the respective factor. An example is the import of labor-intensive goods by the United States from China. Instead of importing Chinese labor the United States is importing goods from China that were produced with Chinese labor. International trade is also a branch of economics, which, together with international finance, forms the larger branch of international economics.

Models used to predict trade patterns

Several different models have been proposed to predict patterns of trade and to analyze the effects of trade policies such as tariffs.

Ricardian model

The Ricardian model focuses on comparative advantage and is perhaps the most important concept in international trade theory. In a Ricardian model, countries specialize in producing what they produce best. Unlike other models, the Ricardian framework predicts that countries will fully specialize instead of producing a broad array of goods. Also, the Ricardian model does not directly consider factor endowments, such as the relative amounts of labor and capital within a country. The main merit of Ricardin model is that it assumes technology differences between countries. The Ricardian model makes the following assumptions:

1. Labor is the only primary input to production (labor is considered to be the ultimate source of value).
2. Constant Marginal Product of Labor (MPL) (Labor productivity is constant, constant returns to scale, and simple technology.)
3. Limited amount of labor in the economy
4. Labor is perfectly mobile among sectors but not internationally.
5. Perfect competition (price-takers).

The Ricardian model measures in the short-run, therefore technology differs internationally. This supports the fact that countries follow their comparative advantage and allows for specialization.

Modern development of the Ricardian model

The Ricardian trade model was studied by Graham, Jones, McKenzie and others. All the theories excluded intermediate goods, or traded input goods such as materials and capital goods. McKenzie(1954), Jones(1961) and Samuelson(2001)emphasised that condiderable gains from trade would be lost once intermediate goods were excluded from trade. In a famous comment McKenzie 1954 pointed that "A moment's consideration will convince one that Lancashire would be unlikely to produce cotton cloth if the cotton had to be grown in England.

Recently, the theory was extended to the case that includes traded intermediates.Thus the "labor only" assumption (#1 above) was removed from the theory. Thus the new Ricardian theory, or the Ricardo-Sraffa model, as it is sometimes named, theoretically includes capital goods such as machines and materials, which are traded across countries. In the time of global trade, this assumption is much more realistic than the Heckscher-Ohlin model, which assumes that capital is fixed inside the country and does not move internatioally.

Heckscher-Ohlin model

Heckscher-Ohlin model

The Heckscher-Ohlin model was produced as an alternative to the Ricardian model of basic comparative advantage. Despite its greater complexity it did not prove much more accurate in its predictions. However from a theoretical point of view it did provide an elegant solution by incorporating the neoclassical price mechanism into international trade theory.

The theory argues that the pattern of international trade is determined by differences in factor endowments. It predicts that countries will export those goods that make intensive use of locally abundant factors and will import goods that make intensive use of factors that are locally scarce. Empirical problems with the H-O model, known as the Leontief paradox, were exposed in empirical tests by Wassily Leontief who found that the United States tended to export labor intensive goods despite having a capital abundance.

The H-O model makes the following core assumptions:

1. Labor and capital flow freely between sectors
2. The production of shoes is labor intensive and computers is capital intensive
3. The amount of labor and capital in two countries differ (difference in endowments)
4. free trade
5. technology is the same across countries (long-term)
6. Tastes are the same.

The problem with the H-O theory is that it excludes the trade of capital goods (including materials and fuels). In the H-O theory, labor and capital are fixed entities endowed to each country. In a modern economy, capital goods are traded internationally. Gains from trade of intermediate goods are considerable, as it was emphasized by Samuelson (2001).In the early 1900s an international trade theory called factor proportions theory emerged by two Swedish economists, Eli Heckscher and Bertil Ohlin. This theory is also called the Heckscher-Ohlin theory. The Heckscher-Ohlin theory stresses that countries should produce and export goods that require resources (factors) that are abundant and import goods that require resources in short supply. This theory differs from the theories of comparative advantage and absolute advantage since these theory focuses on the productivity of the production process for a particular good. On the contrary, the Heckscher-Ohlin theory states that a country should specialise production and export using the factors that are most abundant, and thus the cheapest. Not produce, as earlier theories stated, the goods it produces most efficiently.

Reality and Applicability of the Heckscher-Ohlin Model

The Heckscher-Ohlin theory is preferred to the Ricardo theory by many economists, because it makes fewer simplifying assumptions. In 1953, Wassily Leontief published a study, where he tested the validity of the Heckscher-Ohlin theory The study showed that the U.S was more abundant in capital compared to other countries, therefore the U.S would export capital- intensive goods and import labour-intensive goods. Leontief found out that the U.S's export was less capital intensive than import.

After the appearance of Leontief's paradox, many researchers tried to save the Heckscher-Ohlin theory, either by new methods of measurement, or either by new interpretations. Leamer emphasized that Leontief did not interpret HO theory properly and claimed that with a right interpretation paradox did not occur. Brecher

and Choudri found that, if Leamer was right, the American workers consumption per head should be lower than the workers world average consumption.

Many other trials followed but most of them failed. Many of famous textbook writers, including Krugman and Obstfeld and Bowen, Hollander and Viane, are negative about the validity of H-O model. After examining the long history of empirical research, Bowen, Hollander and Viane concluded: "Recent tests of the factor abundance theory [H-O theory and its developed form into many-commodity and many-factor case] that directly examine the H-O-V equations also indicate the rejection of the theory."Heckscher-Ohlin theory is not well adapted to the analyze South-North trade problems. The assumptions of HO are less realistic with respect to N-S than N-N (or S-S) trade. Income differences between North and South is the one that third world cares most. The factor price equalization [a consequence of HO theory] has not shown much sign of realization. HO model assumes identical production functions between countries. This is highly unrealistic. Technological gap between developed and developing countries is the main concern of the poor countries.

Specific factors model

In this model, labor mobility between industries is possible while capital is immobile between industries in the short-run. Thus, this model can be interpreted as a 'short run' version of the Heckscher-Ohlin model. The specific factors name refers to the given that in the short-run, specific factors of production such as physical capital are not easily transferable between industries. The theory suggests that if there is an increase in the price of a good, the owners of the factor of production specific to that good will profit in real terms. Additionally, owners of opposing specific factors of production (i.e. labor and capital) are likely to have opposing agendas when lobbying for controls over immigration of labor. Conversely, both owners of capital and labor profit in real terms from an increase in the capital endowment. This model is ideal for particular industries. This model is ideal for understanding income distribution but awkward for discussing the pattern of trade.

New Trade Theory

New Trade theory tries to explain several facts about trade, which the two main models above have difficulty with. These include the fact that most trade is between countries with similar factor endowment and productivity levels, and the large amount of multinational production(i.e.foreign direct investment) which exists. In one example of this framework, the economy exhibits monopolistic competition and increasing returns to scale.

Gravity model

Gravity model of trade

The Gravity model of trade presents a more empirical analysis of trading patterns rather than the more theoretical models discussed above. The gravity model, in its basic form, predicts trade based on the distance between countries and the

interaction of the countries' economic sizes. The model mimics the Newtonian law of gravity which also considers distance and physical size between two objects. The model has been proven to be empirically strong through econometric analysis. Other factors such as income level, diplomatic relationships between countries, and trade policies are also included in expanded versions of the model.

Regulation for international trade

This belief became the dominant thinking among western nations since then. In the years since the Second World War, controversial multilateral treaties like the General Agreement on Tariffs and Trade (GATT) and World Trade Organization have attempted to create a globally regulated trade structure. These trade agreements have often resulted in protest and discontent with claims of unfair trade that is not mutually beneficial.

Free trade is usually most strongly supported by the most economically powerful nations, though they often engage in selective protectionism for those industries which are strategically important such as the protective tariffs applied to agriculture by the United States and Europe. The Netherlands and the United Kingdom were both strong advocates of free trade when they were economically dominant, today the United States, the United Kingdom, Australia and Japan are its greatest proponents. However, many other countries (such as India, China and Russia) are increasingly becoming advocates of free trade as they become more economically powerful themselves. As tariff levels fall there is also an increasing willingness to negotiate non tariff measures, including foreign direct investment, procurement and trade facilitation. The latter looks at the transaction cost associated with meeting trade and customs procedures.

Traditionally agricultural interests are usually in favor of free trade while manufacturing sectors often support protectionism .This has changed somewhat in recent years, however. In fact, agricultural lobbies, particularly in the United States, Europe and Japan, are chiefly responsible for particular rules in the major international trade treaties which allow for more protectionist measures in agriculture than for most other The regulation of international trade is done through the World Trade Organization at the global level, and through several other regional arrangements such as MERCOSUR in South America, the North American Free Trade Agreement (NAFTA) between the United States, Canada and Mexico, and the European Union between 27 independent states. The 2005 Buenos Aires talks on the planned establishment of the Free Trade Area of the Americas (FTAA) failed largely because of opposition from the populations of Latin American nations. Similar agreements such as the Multilateral Agreement on Investment (MAI) have also failed in recent years.

goods and services.

During recessions there is often strong domestic pressure to increase tariffs to protect domestic industries. This occurred around the world during the Great Depression. Many economists have attempted to portray tariffs as the underlining

reason behind the collapse in world trade that many believe seriously deepened the depression.

Risk in international trade

Companies doing business across international borders face many of the same risks as would normally be evident in strictly domestic transactions. For

example, Buyer insolvency (purchaser cannot pay);

- Non-acceptance (buyer rejects goods as different from the agreed upon specifications);
- Credit risk (allowing the buyer to take possession of goods prior to payment);
- Regulatory risk (e.g., a change in rules that prevents the transaction);
- Intervention (governmental action to prevent a transaction being completed);
- Political risk (change in leadership interfering with transactions or prices); and
- War and Acts of God.

In addition, international trade also faces the risk of unfavorable exchange rate movements (and, the potential benefit of favorable movements).

2. Borders

Borders define geographic boundaries of political entities or legal jurisdictions, such as governments, states or sub national administrative divisions. They may foster the setting up of buffer zones. Some borders are fully or partially controlled, and may be crossed legally only at designated border checkpoints.

Definitions of borders

In the past many borders were not clearly defined lines, but were neutral zones called marchlands. This has been reflected in recent times with the neutral zones that were set up along part of Saudi Arabia's borders with Kuwait and Iraq (however, these zones no longer exist). In modern times the concept of a marchland has been replaced by that of the clearly defined and demarcated border. For the purposes of border control, airports and seaports are also classed as borders. Most countries have some form of border control to restrict or limit the movement of people, animals, plants, and goods into or out of the country. Under international law, each country is generally permitted to define the conditions which have to be met by a person to legally cross its borders by its own laws, and to prevent persons from crossing its border when this happens in violation of those laws.

In order to cross borders, the presentation of passports and visas or other appropriate forms of identity document is required by some legal orders. To stay or work within a country's borders aliens (foreign persons) may need special immigration documents or permits that authorize them to do so.

Moving goods across a border often requires the payment of excise tax, often collected by customs officials. Animals (and occasionally humans) moving across

borders may need to go into quarantine to prevent the spread of exotic or infectious diseases. Most countries prohibit carrying illegal drugs or endangered animals across their borders. Moving goods, animals or people illegally across a border, without declaring them, seeking permission, or deliberately evading official inspection constitutes smuggling.

Border economics

The presence of borders often fosters certain economic features or anomalies. Wherever two jurisdictions come into contact, special economic opportunities arise for border 5trade. Smuggling provides a classic case; contrariwise, a border region may flourish on the provision of excise or of import–export services — legal or quasi-legal, corrupt or corruption-free. Different regulations on either side of a border may encourage services to position themselves at or near that border: thus the provision of pornography, of prostitution, of alcohol and/or of narcotics may cluster around borders, city limits, county lines, ports and airports. In a more planned and official context, Special Economic Zones (SEZs) often tend to cluster near borders or ports.

Human economic traffic across borders (apart from kidnapping), may involve mass commuting between workplaces and residential settlements. The removal of internal barriers to commerce, as in France after the French Revolution or in Europe since the 1940s, de-emphasizes border-based economic activity and fosters free trade. Euro regions are similar official structures built around commuting across borders.

International finance

International finance is the branch of economics that studies the dynamics of exchange rates, foreign investment, and how these affect international trade. It also studies international projects, international investments and capital flows, and trade deficits. It includes the study of futures, options and currency swaps. Together with international trade theory, international finance is also a branch of international economics.

Some of the theories which are important in international finance include the Mundell-Fleming model, the optimum currency area (OCA) theory, as well as the purchasing power parity (PPP) theory. Moreover, whereas international trade theory makes use of mostly microeconomic methods and theories, international finance theory makes use of predominantly intermediate and advanced macroeconomic methods and concepts.

International economics is concerned with the effects upon economic activity of international differences in productive resources and consumer preferences and the institutions that affect them. It seeks to explain the patterns and consequences of transactions and interactions between the inhabitants of different countries, including trade, investment and migration.

- **International trade** studies goods-and-services flows across international boundaries from supply-and-demand factors, economic integration, and policy variables such as tariff rates and trade quotas.

- **International finance** studies the flow of capital across international financial markets, and the effects of these movements on exchange rates.
- **International monetary economics** and **macroeconomics** studies money and macro flows across countries.

International trade

Scope and methodology

The economic theory of international trade differs from the remainder of economic theory mainly because of the comparatively limited international mobility of the capital and labour [8]. In that respect, it would appear to differ in degree rather than in principle from the trade between remote regions in one country. Thus the methodology of international trade economics differs little from that of the remainder of economics. However, the direction of academic research on the subject has been influenced by the fact that governments have often sought to impose restrictions upon international trade, and the motive for the development of trade theory has often been a wish to determine the consequences of such restrictions.

The branch of trade theory which is conventionally categorized as "classical" consists mainly of the application of deductive logic, originating with Ricardo's Theory of *Comparative Advantage* and developing into a range of theorems that depend for their practical value upon the realism of their postulates. "Modern" trade theory, on the other hand, depends mainly upon *empirical analysis*.

Classical theory

The law of *comparative advantage* provides a logical explanation of international trade as the rational consequence of the comparative advantages that arise from inter-regional differences - regardless of how those differences arise. Since its exposition by John Stuart Mill the techniques of neo-classical economics have been applied to it to model the patterns of trade that would result from various postulated sources of comparative advantage. However, extremely restrictive (and often unrealistic) assumptions have had to be adopted in order to make the problem amenable to theoretical analysis. The best-known of the resulting models, the Heckscher-Ohlin theorem (H-O) depends upon the assumptions of no international differences of technology, productivity, or consumer preferences; no obstacles to pure competition or free trade and no scale economies. On those assumptions, it derives a model of the trade patterns that would arise solely from international differences in the relative abundance of labour and capital (referred to as factor endowments). The resulting theorem states that, on those assumptions, a country with a relative abundance of capital would export capital-intensive products and import labour-intensive products. The theorem proved to be of very limited predictive value, as was demonstrated by what came to be known as the "Leontief Paradox" (the discovery that, despite its capital-rich factor endowment, America was exporting labour-intensive products and importing capital-intensive products) Nevertheless the theoretical techniques (and many of the assumptions) used in deriving the H-O model were subsequently used to derive further theorems. The Stolper-Samuelson theorem , which is often described as a corollary of the H-O theorem, was an early

example. In its most general form it states that if the price of a good rises (falls) then the price of the factor used intensively in that industry will also rise (fall) while the price of the other factor will fall (rise). In the international trade context for which it was devised it means that trade lowers the real wage of the scarce factor of production, and protection from trade raises it. Another corollary of the H-O theorem is Samuelson's factor price equalisation theorem which states that as trade between countries tends to equalise their product prices, it tends also to equalise the prices paid to their factors of production. Those theories have sometimes been taken to mean that trade between an industrialised country and a developing country would lower the wages of the unskilled in the industrialised country. (But, as noted below, that conclusion depends upon the unlikely assumption that productivity is the same in the two countries). Large numbers of learned papers have been produced in attempts to elaborate on the H-O and Stolper-Samuelson theorems, and while many of them are considered to provide valuable insights, they have seldom proved to be directly applicable to the task of explaining trade patterns.)

Modern theory

Modern trade theory moves away from the restrictive assumptions of the H-O theorem and explores the effects upon trade of a range of factors, including technology and scale economies. It makes extensive use of *econometrics* to identify from the available statistics, the contribution of particular factors among the many different factors that affect trade. The contribution of differences of technology have been evaluated in several such studies. The temporary advantage arising from a country's development of a new technology is seen as contributory factor in one study Other researchers have found research and development expenditure, patents issued, and the availability of skilled labor, to be indicators of the technological leadership that enables some countries to produce a flow of such technological innovations. and have found that technology leaders tend to export hi-tech products to others and receive imports of more standard products from them. Another econometric study also established a correlation between country size and the share of exports made up of goods in the production of which there are scale economies . It is further suggested in that study that internationally-traded goods fall into three categories, each with a different type of comparative advantage:

- goods that are produced by the extraction and routine processing of available natural resources – such as coal, oil and wheat, for which developing countries often have an advantage compared with other types of production – which might be referred to as "Ricardo goods";
- low-technology goods, such as textiles and steel, that tend to migrate to countries with appropriate factor endowments - which might be referred to as "Heckscher-Ohlin goods"; and,
- high-technology goods and high scale-economy goods, such as computers and aeroplanes, for which the comparative advantage arises from the availability of R&D resources and specific skills and the proximity to large sophisticated markets.

The effects of international trade

Gains

There is a strong presumption that any exchange that is freely undertaken will benefit both parties, but that does not exclude the possibility that it may be harmful to others. However (on assumptions that included constant returns and competitive conditions) Paul Samuelson has proved that it will always be possible for the gainers from international trade to compensate the losers . Moreover, in that proof, Samuelson did not take account of the gains to others resulting from wider consumer choice, from the international specialisation of productive activities - and consequent economies of scale, and from the transmission of the benefits of technological innovation. An OECD study has suggested that there are further dynamic gains resulting from better resource allocation, deepening specialisation, increasing returns to R&D, and technology spillover. The authors found the evidence concerning growth rates to be mixed, but that there is strong evidence that a 1 per cent increase in openness to trade increases the level of GDP per capita by between 0.9 per cent and 2.0 per cent . They suggested that much of the gain arises from the growth of the most productive firms at the expense of the less productive. Those findings and others have contributed to a broad consensus among economists that trade confers very substantial net benefits, and that government restrictions upon trade are generally damaging.

Factor price equalization

Nevertheless there have been widespread misgivings about the effects of international trade upon wage earners in developed countries. Samuelson‘s factor price equalisation theorem indicates that, if productivity were the same in both countries, the effect of trade would be to bring about equality in wage rates. As noted above, that theorem is sometimes taken to mean that trade between an industrialised country and a developing country would lower the wages of the unskilled in the industrialised country. However, it is unreasonable to assume that productivity would be the same in a low-wage developing country as in a high-wage developed country. A 1999 study has found international differences in wage rates to be approximately matched by corresponding differences in productivity . (Such discrepancies that remained were probably the result of over-valuation or under-valuation of exchange rates, or of inflexibilities in labour markets.) It has been argued that, although there may sometimes be short-term pressures on wage rates in the developed countries, competition between employers in developing countries can be expected eventually to bring wages into line with their employees' *marginal products*. Any remaining international wage differences would then be the result of productivity differences, so that there would be no difference between unit labour costs in developing and developed countries, and no downward pressure on wages in the developed countries.

Terms of trade

There has also been concern that international trade could operate against the interests of developing countries. Influential studies published in 1950 by the Argentine economist Raul Prebisch and the British economist Hans Singer suggested that there is a tendency for the prices of agricultural products to fall

relative to the prices of manufactured goods; turning the *terms of trade* against the developing countries and producing an unintended transfer of wealth from them to the developing countries. Their findings have been confirmed by a number of subsequent studies, although it has been suggested that the effect may be due to *quality bias* in the index numbers used or to the possession of *market power* by manufacturers . The Prebisch/Singer findings remain controversial, but they were used at the time - and have been used subsequently - to suggest that the developing countries should erect barriers against manufactured imports in order to nurture their own "infant industries" and so reduce their need to export agricultural products. The arguments for and against such a policy are similar to those concerning the *protection* of infant industries in general.

Infant industries

The term "infant industry" is used to denote a new industry which has prospects of becoming profitable in the long-term, but which would be unable to survive in the face of competition from imported goods. That is a situation that can occur because time is needed either to achieve potential *economies of scale*, or to acquire potential *learning curve* economies. Successful identification of such a situation followed by the temporary imposition of a barrier against imports can, in principle, produce substantial benefits to the country that applies it – a policy known as "import substitution industrialization". Whether such policies succeed depends upon governments' skills in picking winners, and there might reasonably be expected to be both successes and failures. It has been claimed that North Korea's automobile industry owes its existence to initial protection against imports , but a study of infant industry protection in Turkey reveals the absence of any association between productivity gains and degree of protection, such as might be expected of a successful import substitution policy. . Another study provides descriptive evidence suggesting that attempts at import substitution industrialisation since the 1970s have usually failed , but the empirical evidence on the question has been contradictory and inconclusive . It has been argued that the case against import substitution industrialization is not that it is bound to fail, but that subsidies and tax incentives do the job better]. It has also been pointed out that, in any case, trade restrictions could not be expected to correct the domestic market imperfections that often hamper the development of infant industries

Trade policies

Economists' findings about the benefits of trade have often been rejected by government policy-makers, who have frequently sought to protect domestic industries against foreign competition by erecting barriers, such as *tariffs* and *quotas*, against imports. Average tariff levels of around 15 per cent in the late 19th century rose to about 30 percent in the 1930s, following the passage in the United States of the Smoot-Hawley Act . Mainly as the result of international agreements under the auspices of the General Agreement on Tariffs and Trade (GATT) and subsequently the World Trade Organisation (WTO), average tariff levels were progressively reduced to about 7 per cent during the second half of the 20th century, and some other trade restrictions were also removed. The restrictions that remain are nevertheless of major economic importance: among other estimates the World

Bank estimated in 2004 that the removal of all trade restrictions would yield benefits of over $500 billion a year by 2015 . The largest of the remaining trade-distorting policies are those concerning agriculture. In the OECD countries government payments account for 30 per cent of farmers' receipts and tariffs of over 100 per cent are common OECD economists estimate that cutting all agricultural tariffs and subsidies by 50% would set off a chain reaction in realignments of production and consumption patterns that would add an extra $26 billion to annual world income.

Quotas prompt foreign suppliers to raise their prices toward the domestic level of the importing country. That relieves some of the competitive pressure on domestic suppliers, and both they and the foreign suppliers gain at the expense of a loss to consumers, and to the domestic economy, in addition to which there is a *deadweight loss* to the world economy. When quotas were banned under the rules of the General Agreement on Tariffs and Trade (GATT), the United States, Britain and the European Union made use of equivalent arrangements known as *voluntary restraint agreements* (VRAs) or voluntary export restraints (VERs) which were negotiated with the governments of exporting countries (mainly Japan) - until they too were banned. Tariffs have been considered to be less harmful than quotas, although it can be shown that their welfare effects differ only when there are significant upward or downward trends in imports. Governments also impose a wide range of non-tariff barriers that are similar in effect to quotas, some of which are subject to WTO agreements A recent example has been the application of the *precautionary principle* to exclude innovatory products].

International Finance

Scope and methodology

The economics of international finance do not differ in principle from the economics of international trade but there are significant differences of emphasis. The practice of international finance tends to involve greater uncertainties and risks because the assets that are traded are claims to flows of returns that often extend many years into the future. Markets in financial assets tend to be more volatile than markets in goods and services because decisions are more often revised and more rapidly put into effect. There is the share presumption that a transaction that is freely undertaken will benefit both parties, but there is a much greater danger that it will be harmful to others. For example, mismanagement of mortgage lending in the United States led in 2008 to banking failures and credit shortages in other developed countries, and sudden reversals of international flows of capital have often led to damaging financial crises in developing countries. And, because of the incidence of rapid change, the methodology of *comparative statics* has fewer applications than in the theory of international trade, and *empirical analysis* is more widely employed. Also, the consensus among economists concerning its principal issues is narrower and more open to controversy than is the consensus about international trade.

Exchange rates and capital mobility

A major change in the organisation of international finance occurred in the latter years of the twentieth century, and economists are still debating its implications. At

the end of the second world war the national signatories to the Bretton Woods Agreement had agreed to maintain their currencies each at a fixed exchange rate with the United States dollar, and the United States government had undertaken to buy gold on demand at a fixed rate of $35 per ounce. In support of those commitments, most signatory nations had maintained strict control over their nationals' use of foreign exchange and upon their dealings in international financial assets. But in 1971 the United States government announced that it was suspending the convertibility of the dollar, and there followed a progressive transition to the current regime of *floating exchange rates* in which most governments no longer attempt to control their exchange rates or to impose controls upon access to foreign currencies or upon access to international financial markets. The behavior of the international financial system was transformed. Exchange rates became very volatile and there was an extended series of damaging financial crises. One study estimated that by the end of the twentieth century there had been 112 banking crises in 93 countries , another that there had been 26 banking crises, 86 currency crises and 27 mixed banking and currency crises - many times more than in the previous post-war years.

The outcome was not what had been expected. In making an influential case for flexible exchange rates in the 1950s, Milton Friedman had claimed that if there were any resulting instability, it would mainly be the consequence of macroeconomic instability]but an empirical analysis in 1999 found no apparent connection ·Economists began to wonder whether the expected advantages of freeing financial markets from government intervention were in fact being realized .Neoclassical theory had led them to expect capital to flow from the capital-rich developed economies to the capital-poor developing countries - because the returns to capital there would be higher. Flows of financial capital would tend to increase the level of investment in the developing countries by reducing their costs of capital, and the direct investment of physical capital would tend to promote specialization and the transfer of skills and technology. However, theoretical considerations alone cannot determine the balance between those benefits and the costs of volatility, and the question has had to be tackled by empirical analysis. A 2006 International Monetary Fund working paper offers a summary of the empirical evidence The authors found little evidence either of the benefits of the liberalization of capital movements, or of claims that it is responsible for the spate of financial crises. They suggest that net benefits can be achieved by countries that are able to meet threshold conditions of financial competence but that for others, the benefits are likely to be delayed, and vulnerability to interruptions of capital flows is likely to be increased.

Policies and Institutions

Although the majority of developed countries now have "floating" exchange rates, some of them – together with many developing countries – maintain exchange rates that are nominally "fixed", usually with the US dollar or the euro. The adoption of a fixed rate requires intervention in the foreign exchange market by the country's central bank, and is usually accompanied by a degree of control over its citizens' access to international markets. A controversial case in point is the policy of the Chinese government who had, until 2005, maintained the renminbi at a fixed rate to the dollar, but have since "pegged" it to a basket of currencies. It is frequently alleged

that in doing so they are deliberately holding its value lower than if it were allowed to float (but there is evidence to the contrary . Some governments have abandoned their national currencies in favour of the common currency of a currency area such as the "*eurozone*" and some, such as Denmark, have retained their national currencies but have pegged them at a fixed rate to an adjacent common currency. On an international scale, the economic policies promoted by the International Monetary Fund (IMF) have had a major influence, especially upon the developing countries. The IMF was set up in 1944 to encourage international cooperation on monetary matters, to stabilise exchange rates and create an international payments system. Its principal activity is the payment of loans to help member countries to overcome *balance of payments problems*, mainly by restoring their depleted currency reserves. Their loans are, however, conditional upon the introduction of economic measures by recipient governments that are considered by the Fund's economists to provide conditions favourable to recovery. Their recommended economic policies are broadly those that have been adopted in the United States and the other major developed countries (known as the "*Washington Consensus*") and have often included the removal of all restrictions upon incoming investment. The Fund has been severely criticised by Joseph Stiglitz and others for what they consider to be the inappropriate enforcement of those policies and for failing to warn recipient countries of the dangers that can arise from the volatility of capital movements.

International financial stability

From the time of the Great Depression onwards, regulators and their economic advisors have been aware that economic and financial crises can spread rapidly from country to country, and that financial crises can have serious economic consequences. For many decades, that awareness led governments to impose strict controls over the activities and conduct of banks and other credit agencies, but in the 1980s many governments pursued a policy of deregulation in the belief that the resulting efficiency gains would outweigh any *systemic risk*s. The extensive financial innovations that followed are described in the article on financial economics. One of their effects has been greatly to increase the international inter-connectedness of the financial markets and to create an international financial system with the characteristics known in control theory as "complex-interactive". The stability of such a system is difficult to analyze because there are many possible failure sequences. The internationally-systemic crises that followed included the equity crash of October 1987 , the Japanese asset price collapse of the 1990s the Asian financial crisis of 1997the Russian government default of 1998 (which brought down the Long-Term Capital Management hedge fund) and the 2007-8 sub-prime mortgages crisis. The symptoms have generally included collapses in asset prices, increases in risk premiums, and general reductions in liquidity. Measures designed to reduce the vulnerability of the international financial system have been put forward by several international institutions. The Bank for International Settlements made two successive recommendations (Basel I and Basel II concerning the regulation of banks, and a coordinating group of regulating authorities, and the Financial Stability Forum, that was set up in 1999 to identify and address the weaknesses in the system, has put forward some proposals in an interim report .

Free trade

Free trade is a type of trade policy that allows traders to act and transact without interference from government. According to the law of comparative advantage the policy permits trading partners mutual gains from trade of goods and services.

Under a free trade policy, prices are a reflection of true supply and demand, and are the sole determinant of resource allocation. Free trade differs from other forms of trade policy where the allocation of goods and services amongst trading countries are determined by artificial prices that do not reflect the true nature of supply and demand. These artificial prices are the result of protectionist trade policies, whereby governments intervene in the market through price adjustments and supply restrictions. Such government interventions generally increase the cost of goods and services to both consumers and producers.

Interventions include subsidies, taxes and tariffs, non-tariff barriers, such as regulatory legislation and quotas, and even inter-government managed trade agreements such as the North American Free Trade Agreement (NAFTA) and Central America Free Trade Agreement (CAFTA) (contrary to their formal titles) and any governmental market intervention resulting in artificial prices that do not reflect the principles of supply and demand.

Most states conduct trade polices that are to a lesser or greater degree protectionist. One ubiquitous protectionist policy employed by states comes in the form agricultural subsidies whereby countries attempt to protect their agricultural industries from outside competition by creating artificial low prices for their agricultural goods.

Free trade agreements are a key element of customs unions and free trade areas. The details and differences of these agreements are covered in their respective articles.

In literature

The value of free trade was first observed and documented by Adam Smith in his *magnum opus*, *The Wealth of Nations*, in 1776.Later, David Ricardo made a case for free trade by presenting specialized an economic proof featuring a single factor of production with constant productivity of labor in two goods, but with relative productivity between the goods different across two countries.] Ricardo's model demonstrated the benefits of trading via specialization—states could acquire more than their labor alone would permit them to produce. This basic model ultimately led to the formation of one of the fundamental laws of economics: The Law of Comparative Advantage. The Law of Comparative Advantage states that each member in a group of trading partners should specialize in and produce the goods in which they possess lowest opportunity costs relative to other trading partners. This specialization permits trading partners to then exchange their goods produced as a function of specialization. Under a policy of free trade, trade via specialization maximizes labor, wealth and quantity of goods produce, exceeding what an equal number of autarkic states could produce.

Features of free trade

Free trade implies the following features

- trade of goods without taxes (including tariffs) or other trade barriers (*e.g.,* quotas on imports or subsidies for producers)
- trade in services without taxes or other trade barriers
- The absence of "trade-distorting" policies (such as taxes, subsidies, regulations, or laws) that give some firms, households, or factors of production an advantage over others
- Free access to markets
- Free access to market information
- Inability of firms to distort markets through government-imposed monopoly or oligopoly power
- The free movement of labor between and within countries
- The free movement of capital between and within countries

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The United States and free trade

Trade in colonial America was regulated by the British mercantile system through the Acts of Trade and Navigation. Until the 1760s, few colonists openly advocated for free trade, in part because regulations were not strictly enforced—New England was famous for smuggling—but also because colonial merchants did not want to compete with foreign goods and shipping. According to historian Oliver Dickerson, a desire for free trade was not one of the causes of the American Revolution. "The idea that the basic mercantile practices of the eighteenth century were wrong," wrote Dickerson, "was not a part of the thinking of the Revolutionary leaders Free trade came to what would become the United States as a result of American Revolutionary War, when the British Parliament issued the Prohibitory Act, blockading colonial ports. The Continental Congress responded by effectively declaring economic independence, opening American ports to foreign trade on April 6, 1776. According to historian John W. Tyler, "Free trade had been forced on the Americans, like it or not."

The 1st U.S. Secretary of the Treasury, Alexander Hamilton, advocated tariffs to help protect infant industries in his "Report on Manufactures." This was a minority position, however, which the "Jeffersonians" strongly opposed for the most part. Later, in the 19th century, statesmen such as Senator Henry Clay continued Hamilton's themes within the Whig Party under the name "American System." The opposition Democratic Party contested several elections throughout the 1830s, 1840s, and 1850s in part over the issue of the tariff and protection of industry. The Democratic Party favored moderate tariffs used for government revenue only, while the Whig's favored higher protective tariffs to protect favored industries. The economist Henry Charles Carey became a leading proponent of the "American System" of economics. This mercantilist "American System" was opposed by the Democratic Party of Andrew Jackson, Martin Van Buren, James K. Polk, Franklin Pierce, and James Buchanan.

The fledgling Republican Party led by Abraham Lincoln, who called himself a "Henry Clay tariff Whig," strongly opposed free trade and implemented at 44 percent tariff

during the Civil War in part to pay for railroad subsidies, the war effort, and to protect favored industries. President William McKinley stated the United States' stance under the Republican Party (which won every election for President until 1912, except the two non-consecutive terms of Grover Cleveland) as thus:

"Under free trade the trader is the master and the producer the slave. Protection is but the law of nature, the law of self-preservation, of self-development, of securing the highest and best destiny of the race of man. [It is said] that protection is immoral.... Why, if protection builds up and elevates 63,000,000 [the U.S. population] of people, the influence of those 63,000,000 of people elevates the rest of the world. We cannot take a step in the pathway of progress without benefitting mankind everywhere. Well, they say, 'Buy where you can buy the cheapest'.... Of course, that applies to labor as to everything else. Let me give you a maxim that is a thousand times better than that, and it is the protection maxim: 'Buy where you can pay the easiest.' And that spot of earth is where labor wins its highest rewards."

On the other side:

The growing Free Trade Movement sought an end to the tariffs and corruption in state and federal governments by every means available to them, leading to several outcomes. The first and most important was the rise of the Democratic Party with Grover Cleveland at its helm. The next most important were the rise of the "Mugwumps" within the Republican party. For many Jeffersonian radicals, neither went far enough or sufficiently effective in their efforts and looked for alternatives. The first major movement of the radical Jeffersonians evolved from the insights of a young journalist and firebrand, Henry George. - Kenneth R. Gregg, George Mason University History News Network

The tariff and support of protection to support the growth of infrastructure and industrialization of the nation became a leading tenet of the Republican Party thereafter until the Eisenhower administration and the onset of the Cold War, when the Democratic and Republican parties switched positions.

In the 1930s, the US adopted the protectionist Hawley-Smoot Tariff Act which raised rates to all time highs beyond the Lincoln levels, which many economists believe exacerbated the Great Depression. Europe, which had less protectionism at the time, had largely come out of the depression while the US remained mired in the depression. Franklin D. Roosevelt resorted to Hamilton's earlier formula of tariff Reciprocity coupled with subsidy to industry which went unbroken until the 1970s when protectionism was reduced after the Kennedy Round of trade talks in the late sixties.

Since the end of World War II, in part due to industrial supremacy and the onset of the Cold War, the U.S. government has become one of the most consistent proponents of reduced tariff barriers and free trade, having helped establish the General Agreement on Tariffs and Trade (GATT) and later the World Trade Organization (WTO); although it had rejected an earlier version in the 1950s (International Trade Organization or ITO). Since the 1970s U.S. government has negotiated numerous managed trade agreements, such as the North American Free

Trade Agreement (NAFTA) in the 1990s, the Dominican Republic-Central America Free Trade Agreement (CAFTA) in 2006, and a number of bilateral agreements (such as with Jordan).

Current status

Status of WTO negotiations: members (including dual-representation with the European Union) Draft Working Party Report or Factual Summary adopted Goods and/or Services offers submitted Memorandum on Foreign Trade Regime submitted observer, negotiations to start later or no Memorandum on FTR submitted frozen procedures or no negotiations in the last 3 years no official interaction with the WTO

Most (but not all) countries in the world are members of the World Trade Organization (see map), which limits in certain ways but does not eliminate tariffs and other trade barriers. Most countries are also members of regional free trade areas (see map) which lower trade barriers among participating countries.

Most countries prohibit foreign airlines from cabotage (transporting passengers between two domestic locations), and foreign landing rights are generally restricted, but open skies agreements have become more common.

Notable contemporary trade barriers include ongoing tariffs, import quotas, sanctions and embargoes, currency manipulation of the Chinese yuan with respect to the U.S. dollar, agricultural subsidies in developed countries, and buy American laws.

Economics of free trade

Economic models

Two simple ways to understand the potential benefits of free trade are through David Ricardo's theory of comparative advantage and by analyzing the impact of a tariff or import quota.

The pink regions are the net loss to society caused by the existence of the tariff.

A simple economic analysis using the law of supply and demand and the economic effects of a tax can be used to show the theoretical benefits of free trade.[10]

The chart at the right analyzes the effect of the imposition of an import tariff on some imaginary good. Prior to the tariff, the price of the good in the world market (and hence in the domestic market) is P. The tariff increases the domestic price to P_t. The higher price causes domestic production to increase from Q^{S1} to Q^{S2} and causes domestic consumption to decline from Q^{C1} to Q^{C2}. This has three main effects on societal welfare. Consumers are made worse off because the consumer surplus (green region) becomes smaller. Producers are better off because the producer surplus (yellow region) is made larger. The government also has additional tax revenue (blue region). However, the loss to consumers is greater than the gains by

producers and the government. The magnitude of this societal loss is shown by the two pink triangles. Removing the tariff and having free trade would be a net gain for society.

An almost identical analysis of this tariff from the perspective of a net producing country yields parallel results. From that country's perspective, the tariff leaves producers worse off and consumers better off, but the net loss to producers is larger than the benefit to consumers (there is no tax revenue in this case because the country being analyzed is not collecting the tariff). Under similar analysis, export tariffs, import quotas, and export quotas all yield nearly identical results. Sometimes consumers are better off and producers worse off, and sometimes consumers are worse off and producers are better off, but the imposition of trade restrictions causes a net loss to society because the losses from trade restrictions are larger than the gains from trade restrictions. Free trade creates winners and losers, but theory and empirical evidence show that the size of the winnings from free trade are larger than the losses.

Trade diversion

According to mainstream economic theory, global free trade is a net benefit to society, but the selective application of free trade agreements to some countries and tariffs on others can sometimes lead to economic inefficiency through the process of trade diversion. It is economically efficient for a good to be produced by the country which is the lowest cost producer, but this will not always take place if a high cost producer has a free trade agreement while the low cost producer faces a high tariff. Applying free trade to the high cost producer (and not the low cost producer as well) can lead to trade diversion and a net economic loss. This is why many economists place such high importance on negotiations for global tariff reductions, such as the Doha Round.

Opinion of economists

The literature analysing the economics of free trade is extremely rich with extensive work having been done on the theoretical and empirical effects. Though it creates winners and losers, the broad consensus among members of the economics profession in the U.S. is that free trade is a large and unambiguous net gain for society. In a 2006 survey of American economists (83 responders), "87.5% agree that the U.S. should eliminate remaining tariffs and other barriers to trade" and "90.1% disagree with the suggestion that the U.S. should restrict employers from outsourcing work to foreign countries." Quoting Harvard economics professor N. Gregory Mankiw, "Few propositions command as much consensus among professional economists as that open world trade increases economic growth and raises living standards." Nonetheless, quoting Prof. Peter Soderbaum of Malardalen University, Sweden, "This neoclassical trade theory focuses on one dimension, i.e., the price at which a commodity can be delivered and is extremely narrow in cutting off a large number of other considerations about impacts on employment in different parts of the world, about environmental impacts and on culture." Most free traders would agree that there are winners and losers from free trade, but argue that this is not a reason to argue against free trade, because free trade is supposed to bring

overall gain due to idea that the winners have gained enough to make up for the losses of the losers and then some. Chang argues otherwise, saying that the economy could shrink as a result, and that some people being worse off due to trade displacement without recourse to welfare assistance to find a better job (as might be expected in poor countries) is not acceptable.In an assessment of the literature on the theory and empirical research relating to the benefits of free trade, Sonali Deraniyagala and Ben Fine found that much of the work was flawed, and concluded that the extent to which free trade benefits economic development is unknown Theoretical arguments are largely dependent upon specific empirical assumptions which may or may not hold true. In the empirical literature, many studies suggest the relationship is ambiguous, and the data and econometrics underlying a set of empirical papers showing positive results have been critiqued. The best of these papers use a simplified model, and the worst involve the regression of an index of economic performance on an index of openness to trade, with a mix of these two approaches common. In some cases, Deraniyagala and Fine claim, these indexes of openness actually reflect trade volume rather than policy orientation. They also observe that it is difficult to disentangle the effects of reverse causality and numerous exogenous variables.

In *Kicking Away the Ladder*, Ha-Joon Chang reviews the history of free trade policies and economic growth, and notes that many of the now-industrialized countries had significant barriers to trade throughout their history. Protectionism under the auspices of the infant industry argument (related to import substitution industrialization), was first pursued by Alexander Hamilton in the 1790s in opposition to the admonition of Adam Smith, who advised that the United States focus on agriculture, where it had a comparative advantage. In the 1840s Friedrich List, known as the father of the infant industry argument,advocated the infant industry argument for Germany. Chang's research shows that the United States and Britain, sometimes considered to be the homes of free trade policy, were aggressive protectionists. Britain did end its protectionism when it achieved technological superiority in the late 1850s with the repeal of the Corn Laws, but tariffs on manufactured products had returned to 23% by 1950. The United States maintained weighted average tariffs on manufactured products of approximately 40-50% up until the 1950s, augmented by the natural protectionism of high transportation costs in the 1800s The most consistent practitioners of free trade have been Switzerland, the Netherlands, and to a lesser degree Belgium.

Chang describes the export-oriented industrialization policies of the Asian Tigers as "far more sophisticated and fine-tuned than their historical equivalents".

American intellectual Noam Chomsky argues that David Ricardo's theory of comparative advantage, often offered to promote free trade, assumes that capital is more or less immobile and labor highly mobile, but today these assumptions have been reversed in practice.

Opposition

The relative costs, benefits and beneficiaries of free trade are debated by academics, governments and interest groups. A number of arguments for and against in the ongoing public debate can be seen in the free trade debate article.

Arguments for protectionism fall into the economic category (trade hurts the economy) or the moral category (the effects of trade might help the economy, but have ill effects in other areas). The moral category is wide, including concerns of income inequality, environmental degradation, supporting child labor and sweatshops, race to the bottom, wage slavery, accentuating poverty in poor countries, harming national defense, and forcing cultural change.

Free trade is often opposed by domestic industries that would have their profits and market share reduced by lower prices for imported goods.For example, if United States tariffs on imported sugar were reduced, U.S. sugar producers would receive lower prices and profits, while U.S. sugar consumers would spend less for the same amount of sugar because of those same lower prices. Economics says that consumers would necessarily gain more than producers would lose. Since each of those few domestic sugar producers would lose a lot while each of a great number of consumers would gain only a little, domestic producers are more likely to mobilize against the lifting of tariffs. More generally, producers often favor domestic subsidies and tariffs on imports in their home countries, while objecting to subsidies and tariffs in their export markets.

Socialists frequently oppose free trade on the ground that it allows maximum exploitation of workers by capital. For example, Karl Marx wrote in *The Communist Manifesto*, "The bourgeoisie... has set up that single, unconscionable freedom -- Free Trade. In one word, for exploitation, veiled by religious and political illusions, it has substituted naked, shameless, direct, brutal exploitation."

"Free trade" is opposed by many anti-globalization groups, based on their assertion that free trade agreements generally do not increase the economic freedom of the poor, and frequently make them poor These opponents see free trade deals as being materially harmful to the common people, whether these agreements are really for free trade or for government-managed trade. Nevertheless, if the deals are essentially for government-managed trade, arguing against them is not a direct argument against free trade *per se*. For example, it is argued that it would be wrong to let subsidized corn from the U.S. into Mexico freely under NAFTA at prices well below production cost (dumping) because of its ruinous effects to Mexican farmers. Of course, such subsidies violate free trade, so this argument is not actually against the principle of free trade, but rather its selective implementation.

Latin America performed poorly since tariff cuts in 1980s and 1990s, compared to protectionist China and Southeast Asia According to Samuelson, it is wrong to assume a necessary surplus of winnings over losings The paper, "Will inventions A or B lower or raise the new market-clearing real wage rates that sustain high-to-full employment" condemned "economists' over-simple complacency about globalization" and said that workers don't always win. Some economists try to emphasize that trade barriers should exist to help poor nations build domestic industries and give rich nations time to retrain workers.

Ecuadorian President Rafael Correa has denounced the "sophistry of free trade" in an introduction he wrote for a book titled *The Hidden Face of Free Trade Accords*, written in part by Correa's current Energy Minister Alberto Acosta. Citing as his source the book *Kicking Away the Ladder*, written by Ha-Joon Chang, Correa identified the difference between an "American system" opposed to a "British System" of free trade. The latter, he says, was explicitly viewed by the Americans as "part of the British imperialist system." According to Correa, Chang showed that it was Treasury Secretary Alexander Hamilton, and not Friedrich List, who was the first to present a systematic argument defending industrial protectionism.

The following alternatives for free trade are proposed balanced trade, fair trade, protectionism and Tobin tax.

Promotors

On April 1st, 2009, The Freedom to Trade Coalition an initiative of the International Policy Network and the Atlas Economic Research Foundation, comprising over 76 civil society organisation from 48 countries - launched an open letter calling on all governments to eliminate trade barrieres. Signatories include Nobel Prize winning economist Vernon Smith, former US Secretary of State George Shultz, former Prime Minste of Estonia Mart Laar, former Kremlin chief economist Andrei Illarionov and many other eminent economists, philosophers and other academics. In total, over 3,000 people have so far signed the letter including over 1,000 academics.

Warning of the dangers of resurgent protectionism, the letter observes : " Protectionism creates poverty, not prosperity. Protectionism doesn't even "protect" domestic jobs or indistries; it destroy them, by harming export industries and industries that rely on imports to make their goods. Raising loval prices of steel by "protecting" local steel companies just raises the cost of producing cars and the many other goods made with steel. Protectionism is a fool's game"

The Freedom to Trade coalition has also committed itself to monitoring the actions of government around the world.

Comparative advantage

In economics, the **law of comparative advantage** refers to the ability of a party (an individual, a firm, or a country) to produce a particular good or service at a lower opportunity cost than another party. It is the ability to produce a product most efficiently given all the other products that could be produced. It can be contrasted with absolute advantage which refers to the ability of a party to produce a particular good at a lower absolute cost than another.

Comparative advantage explains how trade can create value for both parties even when one can produce all goods with fewer resources than the other. The net benefits of such an outcome are called gains from trade.

Origins of the theory

Comparative advantage was first described by Robert Torrens in 1815 in an essay on the Corn Laws. He concluded it was to England's advantage to trade with Portugal in return for grain, even though it might be possible to produce that grain more cheaply in England than Portugal.

However the term is usually attributed to David Ricardo who explained it in his 1817 book *On the Principles of Political Economy and Taxation* in an example involving England and Portugal. In Portugal it is possible to produce both wine and cloth with less labor than it would take to produce the same quantities in England. However the *relative costs* of producing those two goods are different in the two countries. In England it is very hard to produce wine, and only moderately difficult to produce cloth. In Portugal both are easy to produce. Therefore while it is cheaper to produce cloth in Portugal than England, it is cheaper still for Portugal to produce excess wine, and trade that for English cloth. Conversely England benefits from this trade because its cost for producing cloth has not changed but it can now get wine at a lower price, closer to the cost of cloth. The conclusion drawn is that each country can gain by specializing in the good where it has comparative advantage, and trading that good for the other.

Examples

The following hypothetical examples explain the reasoning behind the theory. In Example 2 all assumptions are italicized for easy reference, and some are explained at the end of the example.

Example 1

Two men live alone on an isolated island. To survive they must undertake a few basic economic activities like water carrying, fishing, cooking and shelter construction and maintenance. The first man is young, strong, and educated. He is also, faster, better, more productive at everything. He has an absolute advantage in all activities. The second man is old, weak, and uneducated. He has an absolute disadvantage in all economic activities. In some activities the difference between the two is great; in others it is small.

Despite the fact that the younger man has absolute advantage in all activities, it is not in the interest of either of them to work in isolation since they both can benefit from specialization and exchange. If the two men divide the work according to comparative advantage then the young man will specialize in tasks at which he is most productive, while the older man will concentrate on tasks where his productivity is only a little less than that of the young man. Such an arrangement will increase total production for a given amount of labor supplied by both men and it will benefit both of them.

Example 2

Suppose there are two countries *of equal size*, **Northland** and **Southland**, that both produce and consume two goods, **Food** and **Clothes**. The productive capacities and efficiencies of the countries are such that if both countries devoted all their resources to Food production, output would be as follows:

- Northland: 100 tonnes
- Southland: 400 tonnes

If all the resources of the countries were allocated to the production of Clothes, output would be:

- Northland: 100 tonnes
- Southland: 200 tonnes

Assuming each has *constant opportunity costs of production* between the two products and both economies have *full employment at all times*. All *factors of production are mobile within the countries* between clothing and food industries, but are *immobile between the countries*. *The price mechanism must be working to provide perfect competition*.

Southland has an absolute advantage over Northland in the production of Food and Clothing. There seems to be no mutual benefit in trade between the economies, as Southland is more efficient at producing both products. The **opportunity costs** shows otherwise. Northland's opportunity cost of producing one tonne of Food is one tonne of Clothes and vice versa. Southland's opportunity cost of one tonne of Food is 0.5 tonne of Clothes. The opportunity cost of one tonne of Clothes is 2 tonnes of Food. Southland has a comparative advantage in food production, because of its lower opportunity cost of production with respect to Northland. Northland has a comparative advantage over Southland in the production of clothes, the opportunity cost of which is higher in Southland with respect to Food than in Northland.

To show these different opportunity costs lead to mutual benefit if the countries specialize production and trade, consider the countries produce and consume only domestically. The volumes are:

This example includes no formulation of the preferences of consumers in the two economies which would allow the determination of the international exchange rate of Clothes and Food. Given the production capabilities of each country, in order for trade to be worthwhile Northland requires a price of at least one tonne of Food in exchange for one tonne of Clothes; and Southland requires at least one tonne of Clothes for two tonnes of Food. The exchange price will be somewhere between the two. The remainder of the example works with an international trading price of one tonne of Food for 2/3 tonne of Clothes.

If both specialize in the goods in which they have comparative advantage, their outputs will be:

World production of food increased. Clothing production remained the same. Using the exchange rate of one tonne of Food for 2/3 tonne of Clothes, Northland and Southland are able to trade to yield the following level of consumption:

Northland traded 50 tonnes of Clothing for 75 tonnes of Food. Both benefited, and now consume at points outside their production possibility frontiers.

Assumptions in Example 2

- **Two countries, two goods** - the theory is no different for larger numbers of countries and goods, but the principles are clearer and the argument easier to follow in this simpler case.
- **Equal size economies** - again, this is a simplification to produce a clearer example.
- **Full employment** - if one or other of the economies has less than full employment of factors of production, then this excess capacity must usually be used up before the comparative advantage reasoning can be applied.
- **Constant opportunity costs** - a more realistic treatment of opportunity costs the reasoning is broadly the same, but specialization of production can only be taken to the point at which the opportunity costs in the two countries become equal. This does not invalidate the principles of comparative advantage, but it does limit the magnitude of the benefit.
- **Perfect mobility of factors of production within countries** - this is necessary to allow production to be switched *without cost*. In real economies this cost will be incurred: capital will be tied up in plant (sewing machines are not sowing machines) and labour will need to be retrained and relocated. This is why it is sometimes argued that 'nascent industries' should be protected from fully liberalised international trade during the period in which a high cost of entry into the market (capital equipment, training) is being paid for.
- **Immobility of factors of production between countries** - why are there different rates of productivity? The modern version of comparative advantage (developed in the early twentieth century by the Swedish economists Eli Heckscher and Bertil Ohlin) attributes these differences to differences in nations' factor endowments. A nation will have comparative advantage in producing the good that uses intensively the factor it produces abundantly. For example: suppose the US has a relative abundance of capital and India has a relative abundance of labor. Suppose further that cars are capital intensive to produce, while cloth is labor intensive. Then the US will have a comparative advantage in making cars, and India will have a comparative advantage in making cloth. If there is international factor mobility this can change nations' relative factor abundance. The principle of comparative advantage still applies, but who has the advantage in what can change.
- **Negligible Transport Cost** - Cost is not a cause of concern when countries decided to trade. It is ignored and not factored in.
- **Assume that half the resources are used to produce each good in each country.** This takes place before specialization
- **Perfect competition** - this is a standard assumption that allows perfectly efficient allocation of productive resources in an idealized free market.

Example 3

The economist Paul Samuelson provided another well known example in his *Economics*. Suppose that in a particular city the best lawyer happens also to be the best secretary, that is he would be the most productive lawyer and he would also be the best secretary in town. However, if this lawyer focused on the task of being an attorney and, instead of pursuing both occupations at once, employed a secretary, both the output of the lawyer and the secretary would increase.

Effects on the economy

Conditions that maximize comparative advantage do not automatically resolve trade deficits. In fact, in many real world examples where comparative advantage is attainable may in fact require a trade deficit. For example, the amount of goods produced can be maximized, yet it may involve a net transfer of wealth from one country to the other, often because economic agents have widely different rates of saving.

As the markets change over time, the ratio of goods produced by one country versus another variously changes while maintaining the benefits of comparative advantage. This can cause national currencies to accumulate into bank deposits in foreign countries where a separate currency is used.

Macroeconomic monetary policy is often adapted to address the depletion of a nation's currency from domestic hands by the issuance of more money, leading to a wide range of historical successes and failures.

Criticism

Free mobility of capital in a globalized world

Ricardo explicitly bases his argument on an assumed immobility of capital:

> *" ... if capital freely flowed towards those countries where it could be most profitably employed, there could be no difference in the rate of profit, and no other difference in the real or labor price of commodities, than the additional quantity of labor required to convey them to the various markets where they were to be sold."*

He explains why from his point of view (anno 1817) this is a reasonable assumption: *"Experience, however, shows, that the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural disinclination which every man has to quit the country of his birth and connexions, and entrust himself with all his habits fixed, to a strange government and new laws, checks the emigration of capital."*

Some scholars, notably Herman Daly, an American ecological economist and professor at the School of Public Policy of University of Maryland, have voiced

concern over the applicability of Ricardo's theory of comparative advantage in light of a perceived increase in the mobility of capital: *"International trade (governed by comparative advantage) becomes, with the introduction of free capital mobility, interregional trade (governed by Absolute advantage)."*

Protectionism

Protectionism is the economic policy of restraining trade between states, through methods such as tariffs on imported goods, restrictive quotas, and a variety of other restrictive government regulations designed to discourage imports, and prevent foreign take-over of local markets and companies. This policy is closely aligned with anti-globalization, and contrasts with free trade, where government barriers to trade are kept to a minimum. The term is mostly used in the context of economics, where **protectionism** refers to policies or doctrines which protect businesses and workers within a country by restricting or regulating trade with foreign nations.

Protectionism in the United States

Free trade and protectionism are regional issues. Free trade in America is the policy of economics developed by American slave holding states and protectionism is a northern, manufacturing issue. Although not as animating an issue as slavery, differences in trade between the two regions contributed to the Civil War and remain a point of national difference even today.

Historically, southern slave holding states, because of their low cost manual labor, had little perceived need for mechanization, and supported having the right to purchase manufactured goods from any nation. Thus they called themselves free traders.

Northern states, on the other hand, sought to develop a manufacturing capacity, and successfully raised tariffs to allow nascent Northern manufacturers to compete with their more efficient British competitors. Beginning with 1st U.S. Secretary of the Treasury Alexander Hamilton's "Report on Manufactures", in which he advocated tariffs to help protect infant industries, including bounties (subsidies) derived in part from those tariffs, the United States was the leading nation opposed to "free trade" theory. Throughout the 19th century, leading U.S. statesmen, including Senator Henry Clay, continued Hamilton's themes within the Whig Party under the name "American System."

The opposed Southern Democratic Party contested several elections throughout the 1830s, 1840s, and 1850s in part over the issue of the tariff and protection of industry. However, Southern Democrats were never as strong in the US House as the more populated North. The Northern Whigs sought and got higher protective tariffs, over the bitter resistance of the South. One Southern state precipitated what was called the nullification crisis over the issue of tariffs, arguing that states had the right to ignore federal laws. Mostly over the issue of abolition and other scandals, the Whigs would ultimately collapse, leaving a void into which the fledgling Republican Party, led by Abraham Lincoln, would fill. Lincoln, who called himself a "Henry Clay tariff Whig", strongly opposed free trade. He implemented a 44 percent tariff during

the Civil War in part to pay for the building of the Union-Pacific Railroad, the war effort, and to protect American industry.

This support for Northern industry was ultimately successful. By President Lincoln's term, the northern manufacturing states had ten times the GDP of the South. Armed with this economic advantage, the North was easily able to defeat the South by starving the South of weapons through a near total blockade, while at the same time was able to supply its own army with everything from heavy artillery to repeating Henry rifles.

With the North winning the Civil War, Republican dominance was assured over the Democrats. Republicans continued to dominate American politics until around the early 20th century. President William McKinley stated the United States' stance under the Republican Party as thus:

> "Under free trade the trader is the master and the producer the slave. Protection is but the law of nature, the law of self-preservation, of self-development, of securing the highest and best destiny of the race of man. [It is said] that protection is immoral.... Why, if protection builds up and elevates 63,000,000 [the U.S. population] of people, the influence of those 63,000,000 of people elevates the rest of the world. We cannot take a step in the pathway of progress without benefiting mankind everywhere. Well, they say, 'Buy where you can buy the cheapest'.... Of course, that applies to labor as to everything else. Let me give you a maxim that is a thousand times better than that, and it is the protection maxim: 'Buy where you can pay the easiest.' And that spot of earth is where labor wins its highest rewards."

Southern Democrats gradually rebuilt their party, and allied themselves with Northern Progressives. They had many differences but both were staunchly opposed to the great corporate trusts that had built up, and Republican corruption was endemic. This marriage of convenience to face a common enemy reinvigorated the Democratic Party, which catapulted back into power. Northern Progressives sought free trade to undermine the power base of Republicans - Woodrow Wilson would admit as much in a speech to Congress. A brief resurgence by Republicans in the 1920s was disastrous for them. Woodrow Wilson's ideological understudy, Franklin Roosevelt, would essentially blame the Great Depression upon the protectionist policies exemplified by the previous Republican President, Herbert Hoover.

The Democratic Party would continue to advance free trade, to appeal to its southern wing, carefully balancing a growing voice among its labor side for restraint. Free trade were among the postwar goals of the Allies in World War II, and many rounds of discussions and treaties would gradually advance this cause. Having been stuck with the blame for the Great Depression, Republicans would gradually become zealots of free trade, a position they retain to this day.

In the 1960s, the Democratic Party lost its Southern base as it, in concert with northern Republicans, passed numerous Civil Rights reforms. The Republican party leveraged its free trade zealotry, along with a tacit disapproval of civil rights reforms, to gain those Southern Votes. Thus, the Republican Party, traded regions with the

Democratic Party. Ironically, having supported free trade so vocally in response to having been labeled as Herbert Hoover instigators of the Great Depression, Republicans, in the election of 2008, found themselves condemned for not being protectionist.

Protectionist policies

A variety of policies can be used to achieve protectionist goals. These include:

1. *Tariffs*: Typically, tariffs (or taxes) are imposed on imported goods. Tariff rates usually vary according to the type of goods imported. Import tariffs will increase the cost to importers, and increase the price of imported goods in the local markets, thus lowering the quantity of goods imported. Tariffs may also be imposed on exports, and in an economy with floating exchange rates, export tariffs have similar effects as import tariffs. However, since export tariffs are often perceived as 'hurting' local industries, while import tariffs are perceived as 'helping' local industries, export tariffs are seldom implemented.
2. *Import quotas*: To reduce the quantity and therefore increase the market price of imported goods. The economic effects of an import quota is similar to that of a tariff, except that the tax revenue gain from a tariff will instead be distributed to those who receive import licenses. Economists often suggest that import licenses be auctioned to the highest bidder, or that import quotas be replaced by an equivalent tariff.
3. *Administrative Barriers*: Countries are sometimes accused of using their various administrative rules (eg. regarding food safety, environmental standards, electrical safety, etc.) as a way to introduce barriers to imports.
4. *Anti-dumping legislation* Supporters of anti-dumping laws argue that they prevent "dumping" of cheaper foreign goods that would cause local firms to close down. However, in practice, anti-dumping laws are usually used to impose trade tariffs on foreign exporters.
5. *Direct Subsidies*: Government subsidies (in the form of lump-sum payments or cheap loans) are sometimes given to local firms that cannot compete well against foreign imports. These subsidies are purported to "protect" local jobs, and to help local firms adjust to the world markets.
6. *Export Subsidies*: Export subsidies are often used by governments to increase exports. Export subsidies are the opposite of export tariffs, exporters are paid a percentage of the value of their exports. Export subsidies increase the amount of trade, and in a country with floating exchange rates, have effects similar to import subsidies.
7. Exchange Rate manipulation: A government may intervene in the foreign exchange market to lower the value of its currency by selling its currency in the foreign exchange market. Doing so will raise the cost of imports and lower the cost of exports, leading to an improvement in its trade balance. However, such a policy is only effective in the short run, as it will most likely lead to inflation in the country, which will in turn raise the cost of exports, and reduce the relative price of imports.

De facto protectionism

In the modern trade arena many other initiatives besides tariffs have been called protectionist. For example, some commentators, such as Jagdish Bhagwati, see developed countries efforts in imposing their own labor or environmental standards as protectionism. Also, the imposition of restrictive certification procedures on imports are seen in this light.

Further, others point out that free trade agreements often have protectionist provisions such as intellectual property, copyright, and patent restrictions that benefit large corporations. These provisions restrict trade in music, movies, drugs, software, and other manufactured items to high cost producers with quotas from low cost producers set to zero

Arguments for protectionism

Opponents of free trade often argue that the comparative advantage argument for free trade has lost its legitimacy in a globally integrated world—in which capital is free to move internationally. Herman Daly, a leading voice in the discipline of ecological economics, emphasizes that although Ricardo's theory of comparative advantage is one of the most elegant theories in economics, its application to the present day is illogical: "Free capital mobility totally undercuts Ricardo's comparative advantage argument for free trade in goods, because that argument is explicitly and essentially premised on capital (and other factors) being immobile between nations. Under the new globalization regime, capital tends simply to flow to wherever costs are lowest—that is, to pursue absolute advantage."

Protectionists fault the free trade model as being reverse protectionism in disguise, that of using tax policy to protect foreign manufacturers from domestic competition. By ruling out revenue tariffs on foreign products, government must fully rely on domestic taxation to provide its revenue, which falls disproportionately on domestic manufacturing. As Paul Craig Roberts notes: "[Foreign discrimination of US products] is reinforced by the US tax system, which imposes no appreciable tax burden on foreign goods and services sold in the US but imposes a heavy tax burden on US producers of goods and services regardless of whether they are sold within the US or exported to other countries."

Infant industry argument

: Infant industry argument

Some proponents of protectionism claim that imposing tariffs that help protect newly founded infant industries allows those domestic industries to grow and become self-sufficient within the international economy once they reach a reasonable size.

Arguments against protectionism

Protectionism is frequently criticized as harming the people it is meant to help. Nearly all mainstream economists instead support free trade. Economic theory, under the principle of comparative advantage, shows that the gains from free trade outweigh any losses as free trade creates more jobs than it destroys because it

allows countries to specialize in the production of goods and services in which they have a comparative advantage.Protectionism results in deadweight loss; this loss to overall welfare gives no-one any benefit, unlike in a free market, where there is no such total loss. According to economist Stephen P. Magee, the benefits of free trade outweigh the losses by as much as 100 to 1.

Most economists, including Nobel prize winners Milton Friedman and Paul Krugman, believe that free trade helps workers in developing countries, even though they are not subject to the stringent health and labor standards of developed countries. This is because "the growth of manufacturing — and of the myriad of other jobs that the new export sector creates — has a ripple effect throughout the economy" that creates competition among producers, lifting wages and living conditions. Economists have suggested that those who support protectionism ostensibly to further the interests of third world workers are in fact being disingenuous, seeking only to protect jobs in developed countries. Additionally, workers in the third world only accept jobs if they are the best on offer, as all mutually consensual exchanges must be of benefit to both sides, else they wouldn't be entered into freely. That they accept low-paying jobs from first world companies shows that their other employment prospects are worse.

Alan Greenspan, former chair of the American Federal Reserve, has criticized protectionist proposals as leading "to an atrophy of our competitive ability. ... If the protectionist route is followed, newer, more efficient industries will have less scope to expand, and overall output and economic welfare will suffer."

Protectionism has also been accused of being one of the major causes of war. Proponents of this theory point to the constant warfare in the 17th and 18th centuries among European countries whose governments were predominantly mercantilist and protectionist, the American Revolution, which came about primarily due to British tariffs and taxes, as well as the protective policies preceding both World War I and World War II. According to Frederic Bastiat, "When goods cannot cross borders, armies will."

Current world trends

Since the end of World War II, it has been the stated policy of most First World countries to eliminate protectionism through free trade policies enforced by international treaties and organizations such as the World Trade Organization. Certain policies of First World governments have been criticized as protectionist, however, such as the Common Agricultural Policyin the European Union and proposed "Buy American" provisions in economic recovery packages in the United States.

The current round of trade talks by the World Trade Organization is the Doha Development Round and the last session of talks in Geneva, Switzerland led to an impassé. The leaders' statement in the G20 meeting in London in early 2009 included a promise to continue the Doha Round.

Economic integration

Economic integration is a term used to describe how different aspects between economies are integrated. The basics of this theory were written by the Hungarian Economist Béla Balassa in the 1960s. As economic integration increases, the barriers of trade between markets diminishes. The most integrated economy today, between independent nations, is the European Union and its euro zone.

Economist Fritz Machlup traces the origin of the term 'economic integration' to a group of five economists writing in the 1940s, including Wilhelm Röpke, Ludwig von Mises and Friedrich von Hayek. Economic integration was a foundational plank of US foreign policy after World War II

The degree of economic integration can be categorized into six stages:

1. Preferential trading area
2. Free trade area
3. Customs union
4. Common market
5. Economic and monetary union
6. Complete economic integration

Economic integration also tends to precede political integration. In fact, Balassa believed that supranational common markets, with their free movement of economic factors across national borders, naturally generate demand for further integration, not only economically (via monetary unions) but also politically--and, thus, that economic communities naturally evolve into political unions over time.

Trade creation

Trade creation is an economic term related to international economics in which trade is created by the formation of a customs union.

Occurrence of Trade Creation

When a customs union is formed, the member nations establish a free trade area amongst themselves and a common external tariff on non-member nations. As a result, the member nations establish greater trading ties between themselves now that protectionist barriers such as tariffs, quotas, and non-tariff barriers such as subsidies have been eliminated. The result is an increase in trade among member nations in the good or service of each nation's comparative advantage.

Downside of Trade Creation

The creation of trade is important to the nation entering the customs union in that increased specialization may hurt other industries. Arguments for protectionism, such as the infant industry argument, national defense, outsourcing, and issues with health and safety regulations are brought to mind. However, customs unions are typically formed with friendly nations, eliminating the national defense argument, and in the long run serves to create more jobs and output due to specialization.

Trade diversion

Trade diversion is an economic term related to international economics in which trade is diverted from a more efficient exporter towards a less efficient one by the formation of a free trade agreement.

Occurrence

When a country applies the same tariff to all nations, it will always import from the most efficient producer, since the more efficient nation will provide the goods at a lower price. With the establishment of a bilateral or regional free trade agreement, that may not be the case. If the agreement is signed with a less-efficient nation, it may well be that their products become cheaper in the importing market than those from the more-efficient nation, since there are taxes for only one of them. Consequently, after the establishment of the agreement, the importing country would acquire products from a higher-cost producer, instead of the low-cost producer from which it was importing until then. In other words, this would cause a trade diversion.

Term

The term was coined by Jacob Viner in *The Customs Union Issue* in 1950. In its literal meaning the term was however incomplete, as it failed to capture all welfare effects of discriminatory tariff liberalization, and it was not useful when it came to non-tariff barriers. Economists have however dealt with this incompleteness in two ways. Either they stretched the original meaning to cover all welfare effects, or they introduced new terms like trade expansion or internal versus external trade creation.

Downside

Diverted trade may hurt the non-member nation economically and politically and create a strained relationship between the two nations. The decreased output of the good or service traded from one nation with a high comparative advantage to a nation of lower comparative advantage works against creating more efficiency and therefore more overall surplus. It is widely believed by economists that trade diversion is harmful to consumers.

Example

An example of trade diversion is the UK's import of lamb, before Britain joined the EU most lamb imports came from New Zealand, the cheapest lamb producer, however when Britain joined the EU the common external tariff made it more expensive to import lamb from New Zealand than countries inside the union, thus France became the majority exporter of lamb to the UK. Trade was diverted from New Zealand, and created between France and the UK. Balance of trade

Balance of trade

The **balance of trade** (or *net exports*, sometimes symbolized as *NX*) is the difference between the monetary value of exports and imports of output in an economy over a certain period. It is the relationship between a nation's imports and exports. A favourable balance of trade is known as a **trade surplus** and consists of exporting more than is imported; an unfavourable balance of trade is known as a **trade deficit** or, informally, a trade gap. The balance of trade is sometimes divided into a goods and a services balance.

Definition

The balance of trade forms part of the current account, which includes other transactions such as income from the international investment position as well as international aid. If the current account is in surplus, the country's net international asset position increases correspondingly. Equally, a deficit decreases the net international asset position.

The trade balance is identical to the difference between a country's output and its domestic demand (the difference between what goods a country produces and how many goods it buys from abroad; this does not include money re-spent on foreign stocks, nor does it factor the concept of importing goods to produce for the domestic market).

Measuring the balance of trade can be problematic because of problems with recording and collecting data. As an illustration of this problem, when official data for all the world's countries are added up, exports exceed imports by a few percent; it appears the world is running a positive balance of trade with itself. This cannot be true, because all transactions involve an equal credit or debit in the account of each nation. The discrepancy is widely believed to be explained by transactions intended to launder money or evade taxes, smuggling and other visibility problems. However, especially for developed countries, accuracy is likely.

Factors that can affect the balance of trade include:

- The cost of production (land, labor, capital, taxes, incentives, etc.) in the exporting economy vis-à-vis those in the importing economy;
- The cost and availability of raw materials, intermediate goods and other inputs;
- Exchange rate movements;
- Multilateral, bilateral and unilateral taxes or restrictions on trade;
- Non-tariff barriers such as environmental, health or safety standards;
- The availability of adequate foreign exchange with which to pay for imports; and
- Prices of goods manufactured at home (influenced by the responsiveness of supply)

In addition, the trade balance is likely to differ across the business cycle. In export led growth (such as oil and early industrial goods), the balance of trade will improve during an economic expansion. However, with domestic demand led growth (as in

the United States and Australia) the trade balance will worsen at the same stage in the business cycle.

Since the mid 1980s, United States has had a growing deficit in tradeable goods, especially with Asian nations (China and Japan) which now hold large sums of U.S debt that has funded the consumption.The U.S. has a trade surplus with nations such as Australia and Canada. The issue of trade deficits can be complex. Trade deficits generated in tradeable goods such as manufactured goods or software may impact domestic employment to different degrees than trade deficits in raw materials.

Economies such as Canada, Japan, and Germany which have savings surpluses, typically run trade surpluses. China, a high growth economy, has tended to run trade surpluses. A higher savings rate generally corresponds to a trade surplus. Correspondingly, the United States with its lower savings rate has tended to run high trade deficits, especially with Asian nations.

Views on economic impact

Economists are sometimes divided on the economic impact of the trade deficit.

Conditions where trade deficits may be considered harmful

Those who ignore the effects of long run trade deficits may be confusing David Ricardo's principle of comparative advantage with Adam Smith's principle of absolute advantage, specifically ignoring the latter. The economist Paul Craig Roberts notes that the comparative advantage principles developed by David Ricardo do not hold where the factors of production are internationally mobile, a phenomenon described by economist Stephen S. Roach, where one country exploits the cheap labor of another, would be a case of absolute advantage that is not mutually beneficial.Detiorating U.S. net international investment position (NIIP) has caused concern among economists over the effects of outsourcing and high U.S. trade deficits over the long-run.

Since the stagflation of the 1970s, the U.S. economy has been characterized by slower GDP growth. In 1985, the U.S. began its growing trade deficit with China. Over the long run, nations with trade surpluses tend also to have a savings surplus. The U.S. has been plagued by persistently lower savings rates than its trading partners which tend to have trade surpluses. Germany, France, Japan, and Canada have maintained higher savings rates than the U.S. over the long run. Some economists believe that GDP and employment can be dragged down by an over-large deficit over the long run.Wealth-producing primary sector jobs in the U.S. such as those in manufacturing and computer software have often been replaced by much lower paying wealth-consuming jobs such those in retail and government in the service sector when the economy recovered from recessions. Some economists contend that the U.S. is borrowing to fund consumption of imports while accumulating unsustainable amounts of debt.

In 2006, the primary economic concerns centered around: high national debt ($9 trillion), high non-bank corporate debt ($9 trillion), high mortgage debt ($9 trillion), high financial institution debt ($12 trillion), high unfunded Medicare liability ($30 trillion), high unfunded Social Security liability ($12 trillion), high external debt (amount owed to foreign lenders) and a serious deterioration in the United States net international investment position (NIIP) (-24% of GDP), high trade deficits, and a rise in illegal immigration.

These issues have raised concerns among economists and unfunded liabilities were mentioned as a serious problem facing the United States in the President's 2006 State of the Union address. On June 26 2009, Jeff Immelt, the CEO of General Electric, called for the United States to increase its manufacturing base employment to 20% of the workforce, commenting that the U.S. has outsourced too much in some areas and can no longer rely on the financial sector and consumer spending to drive demand.

Conditions where trade imbalances may not be harmful

Small trade imbalances are generally not considered to be harmful to either the importing or exporting economy. However, when a national trade imbalance expands beyond prudence (generally thought to be several percent of GDP, for several years), adjustments tend to occur. While unsustainable imbalances may persist for long periods (cf, Singapore and New Zealand's surpluses and deficits, respectively), the distortions likely to be caused by large flows of wealth out of one economy and into another tend to become intolerable.

In simple terms, trade deficits are paid for out of foreign exchange reserves, and may continue until such reserves are depleted. At such a point, the importer can no longer continue to purchase more than is sold abroad. This is likely to have exchange rate implications: a sharp loss of value in the deficit economy's exchange rate with the surplus economy's currency will change the relative price of tradable goods, and facilitate a return to balance or (more likely) an over-shooting into surplus the other direction.

More complexly, an economy may be unable to export enough goods to pay for its imports, but is able to find funds elsewhere. Service exports, for example, are more than sufficient to pay for Hong Kong's domestic goods export shortfall. In poorer countries, foreign aid may fill the gap while in rapidly developing economies a capital account surplus often off-sets a current-account deficit. Finally, there are some economies where transfers from nationals working abroad contribute significantly to paying for imports. The Philippines, Bangladesh and Mexico are examples of transfer-rich economies.

Milton Friedman on trade deficits

In the 1980s, Milton Friedman, the Nobel Prize-winning economist and father of Monetarism, contended that some of the concerns of trade deficits are unfair criticisms in an attempt to push macroeconomic policies favorable to exporting industries.

Prof. Friedman argued that trade deficits are not necessarily important as high exports raise the value of the currency, reducing aforementioned exports, and vise versa for imports, thus naturally removing trade deficits not due to investment. Milton Friedman's son, David D. Friedman, shares this view and cites the comparative advantage concepts of David Ricardo. In the late 1970s and early 1980s, the U.S. had experienced high inflation and Friedman's policy positions tended to defend the stronger dollar at that time. He stated his belief that these trade deficits were not necessarily harmful to the economy at the time since the currency comes back to the country (country A sells to country B, country B sells to country C who buys from country A, but the trade deficit only includes A and B). However, it may be in one form or another including the possible tradeoff of foreign control of assets. In his view, the "worst case scenario" of the currency never returning to the country of origin was actually the best possible outcome: the country actually purchased its goods by exchanging them for pieces of cheaply-made paper. As Friedman put it, this would be the same result as if the exporting country burned the dollars it earned, never returning it to market circulation. This position is a more refined version of the theorem first discovered by David Hume. Hume argued that England could not permanently gain from exports, because hoarding gold (i.e., currency) would make gold more plentiful in England; therefore, the prices of English goods would rise, making them less attractive exports and making foreign goods more attractive imports. In this way, countries' trade balances would balance out.

Friedman believed that deficits would be corrected by free markets as floating currency rates rise or fall with time to encourage or discourage imports in favor of the exports, reversing again in favor of imports as the currency gains strength. In the real world, a potential difficulty is that currency markets are far from a free market, with government and central banks being major players, and this is unlikely to change within the foreseeable future. Nevertheless, recent developments have shown that the global economy is undergoing a fundamental shift. For many years the U.S. has bore world has lent and sold. However, as Friedman predicted, this paradigm appears to be changing.

As of October 2007, the U.S. dollar weakened against the euro, British pound, and many other currencies. For instance, the euro hit $1.42 in October 2007, the strongest it has been since its birth in 1999. Against this backdrop, American exporters are finding quite favorable overseas markets for their products and U.S. consumers are responding to their general housing slowdown by slowing their spending. Furthermore, China, the Middle East, central Europe and Africa are absorbing more of the world's imports which in the end may result in a world economy that is more evenly balanced. All of this could well add up to a major readjustment of the U.S. trade deficit, which as a percentage of GDP, began in 1991.

Friedman and other economists have pointed out that a large trade deficit (importation of goods) signals that the country's currency is strong and desirable. To Friedman, a trade deficit simply meant that consumers had opportunity to purchase and enjoy more goods at lower prices; conversely, a trade surplus implied that a country was exporting goods its own citizens did not get to consume or enjoy, while paying high prices for the goods they actually received.

Friedman contended that the structure of the balance of payments was misleading. In an interview with Charlie Rose, he stated that "on the books" the US is a net borrower of funds, using those funds to pay for goods and services. He essentially claimed that the foreign assets were not carried on the books at their higher, truer value.

Friedman presented his analysis of the balance of trade in *Free to Choose*, widely considered his most significant popular work.

Warren Buffett on trade deficits

The successful American businessman and investor Warren Buffett was quoted in the Associated Press (January 20, 2006) as saying "The U.S trade deficit is a bigger threat to the domestic economy than either the federal budget deficit or consumer debt and could lead to political turmoil... Right now, the rest of the world owns $3 trillion more of us than we own of them."

John Maynard Keynes on the balance of trade

In the last few years of his life, John Maynard Keynes was much preoccupied with the question of balance in international trade. He was the leader of the British delegation to the United Nations Monetary and Financial Conference in 1944 that established the Bretton Woods system of international currency management.

He was the principal author of a proposal—the so-called Keynes Plan—for an International Clearing Union. The two governing principles of the plan were that the problem of settling outstanding balances should be solved by 'creating' additional 'international money', and that debtor and creditor should be treated almost alike as disturbers of equilibrium. In the event, though, the plans were rejected, in part because *"American opinion was naturally reluctant to accept the principal of equality of treatment so novel in debtor-creditor relationships"*.

His view, supported by many economists and commentators at the time, was that creditor nations may be just as responsible as debtor nations for disequilibrium in exchanges and that both should be under an obligation to bring trade back into a state of balance. Failure for them to do so could have serious consequences. In the words of Geoffrey Crowther, then editor of The Economist, *"If the economic relationships between nations are not, by one means or another, brought fairly close to balance, then there is no set of financial arrangements that can rescue the world from the impoverishing results of chaos."*

These ideas were informed by events prior to the Great Depression when—in the opinion of Keynes and others—international lending, primarily by the United States, exceeded the capacity of sound investment and so got diverted into non-productive and speculative uses, which in turn invited default and a sudden stop to the process of lending.

Influenced by Keynes, economics texts in the immediate post-war period put a significant emphasis on balance in trade. For example, the second edition of the

popular introductory textbook, *An Outline of Money*, devoted the last three of its ten chapters to questions of foreign exchange management and in particular the 'problem of balance'. However, in more recent years, since the end of the Bretton Woods system in 1971, with the increasing influence of Monetarist schools of thought in the 1980s, and particularly in the face of large sustained trade imbalances, these concerns—and particularly concerns about the destabilising affects of large trade surpluses—have largely disappeared from mainstream economics discourse and Keynes' insights have slipped from view, they are receiving some attention again in the wake of the financial crisis of 2007–2009.

Physical balance of trade

Monetary balance of trade is different from physical balance of trade (which is expressed in amount of raw materials). Developed countries usually import a lot of primary raw materials from developing countries at low prices. Often, these materials are then converted into finished products, and a significant amount of value is added. Although for instance the EU (as well as many other developed countries) has a balanced monetary balance of trade, its physical trade balance (especially with developing countries) is negative, meaning that a lot less material is exported than imported.

Balance of payments

In economics, the **balance of payments**, (or **BOP**) measures the payments that flow between any individual country and all other countries. It is used to summarize all international economic transactions for that country during a specific time period, usually a year. The BOP is determined by the country's exports and imports of goods, services, and financial capital, as well as financial transfers. It reflects all payments and liabilities to foreigners (debits) and all payments and obligations received from foreigners (credits). Balance of payments is one of the major indicators of a country's status in international trade, with net capital outflow.

The balance, like other accounting statements, is prepared in a single currency, usually the domestic. Foreign assets and flows are valued at the exchange rate of the time of transaction.

IMF definition

The IMF definition: "**Balance of Payments** is a statistical statement that summarizes transactions between residents and nonresidents during a period." The balance of payments comprises the **current account** and the **capital account** (or the **financial account**). "Together, these accounts balance in the sense that the sum of the entries is conceptually **zero**."

- The **current account** consists of the **goods and services account**, the primary income account and the secondary income account.
- The **capital account** is much smaller than the other two and consists primarily of debt forgiveness and assets from migrants coming to or leaving the country.
- The **financial account** consists of asset inflows and outflows, such as international purchases of stocks, bonds and real estate.

Balance of payments identity

The balance of payments identity states that:

> Current Account = Capital Account + Financial Account + Net Errors and Omissions

This is a convention of double entry accounting, where all debit entries must be booked along with corresponding credit entries such that the net of the Current Account will have a corresponding net of the Capital and Financial Accounts:

$$X + K_i = M + K_o$$

where:

- X = exports
- M = imports
- K_i = capital inflows
- K_o = capital outflows

Rearranging, we have:

$$(X - M) = K_o - K_i,$$

yielding the BOP identity.

The basic principle behind the identity is that a country can only *consume more than it can produce* (a current account deficit) if it *is supplied capital from abroad* (a capital account surplus).

Mercantile thought prefers a so-called balance of payments surplus where the net current account is in surplus or, more specifically, a positive balance of trade.

A **balance of payments equilibrium** is defined as a condition where the sum of debits and credits from the current account and the capital and financial accounts equal to zero; in other words, equilibrium is where

$$\text{Current account} + (\text{Capital and financial accounts}) = 0$$

This is a condition where there are no changes in Official Reserves.When there is no change in Official Reserves, the balance of payments may also be stated as follows:

$$\text{Current account} = -(\text{Capital and financial accounts})$$

or:

$$\text{Current account deficit (or surplus)} = \text{Capital and financial account surplus (or}$$

Canada's Balance of Payments currently satisfies this criterion. It is the only large monetary authority with no Changes in Reserves.

History

Historically these flows simply were not carefully measured due to difficulty in measurement, and the flow proceeded in many commodities and currencies without restriction, clearing being a matter of judgment by individual private banks and the governments that licensed them to operate. Mercantilism was a theory that took special notice of the balance of payments and sought simply to monopolize gold, in part to keep it out of the hands of potential military opponents (a large "war chest" being a prerequisite to start a war, whereupon much trade would be embargoed) but mostly upon the theory that large domestic gold supplies will provide lower interest rates. This theory has not withstood the test of facts.

As mercantilism gave way to classical economics, and private currencies were taxed out of existence, the market systems were later regulated in the 19th century by the gold standard which linked central banks by a convention to redeem "hard currency" in gold. After World War II this system was replaced by the Bretton Woods institutions (the International Monetary Fund and Bank for International Settlements) which pegged currency of participating nations to the US dollar and German mark, which was redeemable nominally in gold. In the 1970s this redemption ceased, leaving the system with respect to the United States without a formal base, yet the peg to the Mark somewhat remained. Strangely, since leaving the gold standard and abandoning interference with Dollar foreign exchange, the surplus in the Income Account has decayed exponentially, and has remained negligible as a percentage of total debits or credits for decades. Some consider the system today to be based on oil, a universally desirable commodity due to the dependence of so much infrastructural capital on oil supply; however, no central bank stocks reserves of crude oil. Since OPEC oil transacts in US dollars, and most major currencies are subject to sudden large changes in price due to unstable central banks, the US dollar remains a reserve currency, but is increasingly challenged by the euro, and to a small degree the pound.

The United States has been running a current account deficit since the early 1980s. The U.S. current account deficit has grown considerably in recent years, reaching record high levels in 2006 both in absolute terms ($758 billion) and as a fraction of GDP (6%).

Criticism

According to Murray Rothbard:

> “ Fortunately, the absurdity of worrying about the balance of payments is made evident by focusing on inter-state trade. For nobody worries about the balance of payments between New York and New Jersey, or, for that matter, between Manhattan and Brooklyn, because there are no customs officials recording such trade and such balances. ”

Trade facilitation.

Trade facilitation looks at how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives. Business costs may be a direct function of collecting information and submitting declarations or an indirect consequence of border checks in the form of delays and associated time penalties, forgone business opportunities and reduced competitiveness.

Understanding and use of the term “trade facilitation” varies in the literature and amongst practitioners. "Trade facilitation" is largely used by institutions which seek to improve the regulatory interface between government bodies and traders at national borders. The WTO, in an online training package, once defined trade facilitation as: “The simplification and harmonisation of international trade procedures” where trade procedures are the “activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade”.

In defining the term, many trade facilitation proponents will also make reference to trade finance and the procedures applicable for making payments (e.g. via a commercial banks). For example UN/CEFACT defines trade facilitation as "the simplification, standardization and harmonization of procedures and associated information flows required to move goods from seller to buyer and to make payment".

Occasionally, the term trade facilitation is extended to address a wider agenda in economic development and trade to include: the improvement of transport infrastructure, the removal of government corruption, the modernization of customs administration, the removal of other non-tariff trade barriers, as well as export marketing and promotion.

Examples of regulatory activity in international trade

Fiscal: Collection of customs duties, excise duties and other indirect taxes; payment mechanisms

Safety and security: Security and anti smuggling controls; dangerous goods; vehicle checks; immigration and visa formalities

Environment and health: Phytosanitary, veterinary and hygiene controls; health and safety measures; CITES controls; ships' waste

Consumer protection: Product testing; labelling; conformity checks with marketing standards (e.g. fruit and vegetables)

Trade policy: Administration of quota restrictions; export refunds

Topics and issues in trade facilitation

Trade facilitation has its intellectual roots in the fields of logistics and supply chain management. Trade facilitation looks at operational improvements at the interface between business and government and associated transaction costs. Trade facilitation has become a key feature in supply chain security and customs modernisation programmes. Within the context of economic development it has also come to prominence in the Doha Development Round. However, it is an equally prominent feature in unilateral and bilateral initiatives that seek to improve the trade environment and enhance business competitiveness. Reference to trade facilitation is sometimes also made in the context of "better regulation". Some organisations promoting trade facilitation will emphasis the cutting of red tape in international trade as their main objective. Propagated ideas and concepts to reforming trade and customs procedures generally resonate around the following themes:

- Simple rules and procedures
- Avoidance of duplication
- Memoranda of Understanding (MoUs)
- Alignment of procedures and adherence to international conventions
- Trade consultation
- Transparent and operable rules and procedures
- Accommodation of business practices
- Operational flexibility
- Public-service standards and performance measures
- Mechanisms for corrections and appeals
- Fair and consistent enforcement
- Proportionality of legislation and control to risk
- Time-release measures
- Risk management and trader authorisations
- Standardisation of documents and electronic data requirements
- Automation
- International electronic exchange of trade data
- Single Window System

International trade law

International trade law includes the appropriate rules and customs for handling trade between countries or between private companies across borders. Over the past twenty years, it has become one of the fastest growing areas of international law.

Overview

International trade law should be distinguished from the broader field of international economic law. The latter could be said to encompass not only WTO law, but also law governing the international monetary system and currency regulation, as well as the law of international development.

The body of rules for transnational trade in the 21st century derives from medieval commercial laws called the *lex mercatoria* and *lex maritima* — respectively, "the law for merchants on land" and "the law for merchants on sea." Modern trade law (extending beyond bilateral treaties) began shortly after the Second World War, with the negotiation of a multilateral treaty to deal with trade in goods: the General Agreement on Tariffs and Trade (GATT).

International trade law is based on theories of economic liberalism developed in Europe and later the United States from the 18th century onwards.

World Trade Organization

In 1995, the World Trade Organization, a formal international organization to regulate trade, was established. It is the most important development in the history of international trade law.

The purposes and structure of the organization is governed by the *Agreement Establishing The World Trade Organization*, also known as the "Marrakesh Agreement". It does not specify the actual rules that govern international trade in specific areas. These are found in separate treaties, annexed to the Marrakesh Agreement.

Trade in goods

The GATT has been the backbone of international trade law throughout most of the twentieth century. It contains rules relating to "unfair" trading practices — dumping and subsidies.

Trade and Human Rights

The World Trade Organisation Trade Related Intellectual Property Rights (TRIPS) agreement required signatory nations to raise intellectual property rights (also

known as intellectual monopoloy privileges. This arguably has had a negative impact on access to essential medicines in some nations.

Dispute settlement

Since there are no international governing judges (2004) the means of dispute resolution is determined by jurisdiction. Each individual country hears cases that are brought before them. Governments choose to be party to a dispute. And private citizens determine jurisdiction by the Forum Clause in their contract.

Besides forum, another factor in international disputes is the rate of exchange. With currency fluctuation ascending and descending over years, a lack of Commerce Clause can jeopardize trade between parties when one party becomes unjustly enriched through natural market fluctuations. By listing the rate of exchange expected over the contract life, parties can provide for changes in the market through reassessment of contract or division of exchange rate fluctuations.

Dumping (pricing policy)

In economics, "**dumping**" can refer to any kind of predatory pricing. However, the word is now generally used only in the context of international trade law, where dumping is defined as the act of a manufacturer in one country exporting a product to another country at a price which is either below the price it charges in its home market or is below its costs of production. The term has a negative connotation, but advocates of free markets see "dumping" as beneficial for consumers and believe that protectionism to prevent it would have *net* negative consequences. Advocates for workers and laborers however, believe that safeguarding businesses against predatory practices, such as dumping, help alleviate some of the harsher consequences of free trade between economies at different stages of development (see *protectionism*). The Bolkestein directive, for example, was accused in Europe of being a form of "social dumping," as it favored competition between workers, as exemplified by the Polish Plumber stereotype. While there are very few examples of a national scale dumping that succeeded in producing a national-level monopoly, there are several examples of dumping that produced a monopoly in regional markets for certain industries. Ron Chenow points to the example of regional oil monopolies in *Titan : The Life of John D. Rockefeller, Sr.* where Rockefeller receives a message from Colonel Thompson outlining an approved strategy where oil in one market, Cincinnati, would be sold at or below cost to drive competition's profits down and force them to exit the market. In another area where other independent businesses were already driven out, namely in Chicago, prices would be increased by a quarter. A standard technical definition of dumping is the act of charging a lower price for a good in a foreign market than one charges for the same good in a domestic market. This is often referred to as selling at less than "fair value." Under the World Trade Organization (WTO) Agreement, dumping is condemned (but is not prohibited) if it causes or threatens to cause material injury to a domestic industry in the importing country.

Remedies and penalties

In United States, domestic firms can file an antidumping petition under the regulations determined by the United States Department of Commerce, which determines "less than fair value" and the International Trade Commission, which determines "injury". These proceedings operate on a timetable governed by U.S. law. The Department of Commerce has regularly found that products have been sold at less than fair value in U.S. markets. If the domestic industry is able to establish that it is being injured by the dumping, then antidumping duties are imposed on goods imported from the dumpers' country at a percentage rate calculated to counteract the dumping margin.

Related to antidumping duties are "countervailing duties." The difference is that countervailing duties seek to offset injurious subsidization while antidumping duties offset injurious dumping.

Some commentators have noted that domestic protectionism, and lack of knowledge regarding foreign cost of production, lead to the unpredictable institutional process surrounding investigation. Members of the WTO can file complaints against anti-dumping measures.

Anti-dumping actions

Legal issues

If a company exports a product at a price lower than the price it normally charges on its own home market, it is said to be "dumping" the product. Opinions differ as to whether or not this is unfair competition, but many governments take action against dumping in order to defend their domestic industries. The WTO agreement does not pass judgment. Its focus is on how governments can or cannot react to dumping—it disciplines anti-dumping actions, and it is often called the "Anti-Dumping Agreement". (This focuses only on the reaction to dumping contrasts with the approach of the Subsidies & Countervailing Measures Agreement.)

The legal definitions are more precise, but broadly speaking the WTO agreement allows governments to act against dumping where there is genuine ("material") injury to the competing domestic industry. In order to do that the government has to be able to show that dumping is taking place, calculate the extent of dumping (how much lower the export price is compared to the exporter’s home market price), and show that the dumping is causing injury or threatening to do so.

Definitions and degrees of dumping

While permitted by the WTO, General Agreement on Tariffs and Trade (GATT) (Article VI) allows countries the option of taking action against dumping. The Anti-Dumping

Agreement clarifies and expands Article VI, and the two operate together. They allow countries to act in a way that would normally break the GATT principles of binding a tariff and not discriminating between trading partners—typically anti-dumping action means charging extra import duty on the particular product from the particular exporting country in order to bring its price closer to the "normal value" or to remove the injury to domestic industry in the importing country.

There are many different ways of calculating whether a particular product is being dumped heavily or only lightly. The agreement narrows down the range of possible options. It provides three methods to calculate a product's "normal value". The main one is based on the price in the exporter's domestic market. When this cannot be used, two alternatives are available—the price charged by the exporter in another country, or a calculation based on the combination of the exporter's production costs, other expenses and normal profit margins. And the agreement also specifies how a fair comparison can be made between the export price and what would be a normal price.

Calculating the extent of dumping on a product is not enough. Anti-dumping measures can only be applied if the dumping is hurting the industry in the importing country. Therefore, a detailed investigation has to be conducted according to specified rules first. The investigation must evaluate all relevant economic factors that have a bearing on the state of the industry in question. If the investigation shows dumping is taking place and domestic industry is being hurt, the exporting company can undertake to raise its price to an agreed level in order to avoid anti-dumping import duty.

Procedures in investigation and litigation

Detailed procedures are set out on how anti-dumping cases are to be initiated, how the investigations are to be conducted, and the conditions for ensuring that all interested parties are given an opportunity to present evidence. Anti-dumping measures must expire five years after the date of imposition, unless a review shows that ending the measure would lead to injury.

Anti-dumping investigations are to end immediately in cases where the authorities determine that the margin of dumping is, *de minimis,* or insignificantly small (defined as less than 2% of the export price of the product). Other conditions are also set. For example, the investigations also have to end if the volume of dumped imports is negligible (i.e., if the volume from one country is less than 3% of total imports of that product—although investigations can proceed if several countries, each supplying less than 3% of the imports, together account for 7% or more of total imports). The agreement says member countries must inform the Committee on Anti-Dumping Practices about all preliminary and final anti-dumping actions, promptly and in detail. They must also report on all investigations twice a year. When differences arise, members are encouraged to consult each other. They can also use the WTO's dispute settlement procedure.

Actions in the European Union

European Union anti-dumping is under the purview of the European Council. It is governed by European Council regulation 384/96. However, implementation of anti-dumping actions (trade defence actions) is taken after voting by various committees with member state representation.

The bureaucratic entity responsible for advising member states on anti-dumping actions is the Directorate General Trade (DG Trade), based in Brussels. Community industry can apply to have an anti-dumping investigation begin. DG Trade first investigates the standing of the complainants. If they are found to represent at least 25% of community industry, the investigation will probably begin. The process is guided by quite specific guidance in the regulations. The DG Trade will make a recommendation to a committee known as the Anti-Dumping Advisory Committee, on which each member state has one vote. Member states abstaining will be treated as if they voted in favour of industrial protection, a voting system which has come under considerable criticism

As is implied by the criterion for beginning an investigation, EU anti-dumping actions are primarily considered part of a "trade defence" portfolio. Consumer interests and non-industry related interests ("community interests") are not emphasized during an investigation. An investigation typically looks for damage caused by dumping to community producers, and the level of tariff set is based on the damage done to community producers by dumping.

If consensus is not found, the decision goes to the European Council.

If imposed, duties last for five years theoretically. In practice they last at least a year longer, because expiry reviews are usually initiated at the end of the five years, and during the review process the status-quo is maintained.

Chinese economic situation

The dumping investigation essentially compares domestic prices of the accused dumping nation with prices of the imported product on the European market. However, several rules are applied to the data before the dumping margin is calculated. Most contentious is the concept of "analogue market". Some exporting nations are not granted "Market Economy Status" by the EU: China is a prime example. In such cases, the DG Trade is prevented from using domestic prices as the fair measure of the domestic price. A particular exporting industry may also lose market status if the DG Trade concludes that this industry receives government assistance. Other tests applied include the application of international accounting standards and bankruptcy laws.

The consequences of not being granted market economy status have a big impact on the investigation. For example, if China is accused of dumping widgets, the basic approach is to consider the price of widgets in China against the price of Chinese widgets in Europe. But China does not have market economy status, so Chinese domestic prices can not be used as the reference. Instead, the DG Trade must decide upon an analogue market: a market which does have market economy status, and which is similar enough to China. Brazil and Mexico have been used, but the USA is

a popular analogue market. In this case, the price of widgets in the USA is regarded as the substitute for the price of widgets in China. This process of choosing an analogue market is subject to the influence of the complainant, which has led to some criticism that it is an inherent bias in the process.

However,China is one of the countries that has the cheapest labourforce. Criticizims have argued that it is quite unreasonable to compare China's goods price to the USA's as analogue. China is now developing to a more free and open market, unlike its planned-economy in the early 60s, the market in China is more willing to embrace the global competition. It is thus required to improve its market regulations and conquer the free trade barriers to improve the situation and produce a properly judged pricing level to assess the "dumping" behavior.

Agricultural support and dumping

European Union and Common Agricultural Policy

The Common Agricultural Policy of the European Union has often been accused of dumping though significant reforms were made as part of the Agreement on Agriculture at the Uruguay round of GATT negotiations in 1992 and in subsequent incremental reforms, notably the Luxembourg Agreement in 2003. Initially the CAP sought to increase European agricultural production and provide support to European farmers through a process of market intervention whereby a special fund - the European Agricultural Guidance and Guarantee Fund (EAGGF) - would buy up surplus agricultural produce if the price fell below a certain centrally determined level (the intervention level). Through this measure European farmers were given a 'guaranteed' price for their produce when sold in the European community. In addition to this internal measure a system of export reimbursements ensured that European produce sold outside of the European community would sell at or below world prices at no detriment to the European producer. This policy was heavily criticized as distorting world trade and since 1992 the policy has moved away from market intervention and towards direct payments to farmers regardless of production (a process of "decoupling"). Furthermore the payments are generally dependent on the farmer fulfilling certain environmental or animal welfare requirements so as to encourage responsible, sustainable farming in what is termed 'multifunctional' agricultural subsidies - that is, the social, environmental and other benefits from subsidies that do not include a simple increase in production.

Multinational corporation

A **multinational corporation** (**MNC**) or **transnational corporation** (**TNC**), also called **multinational enterprise** (**MNE**) is a corporation or enterprise that manages production or delivers services in more than one country. It can also be referred to as an ***international corporation***.

The first modern MNC is generally thought to be the Poor Knights of Christ and the Temple of Solomon, first endorsed by the pope in 1129. The key element of transnational corporations was present even back then: the British East India Company and Dutch East India Company were operating in different countries than

the ones where they had their headquarters. Nowadays many corporations have offices, branches or manufacturing plants in different countries than where their original and main headquarter is located. This is the very definition of a transnational corporation. Having multiple operation points that all respond to one headquarter.

This often results in very powerful corporations that have budgets that exceed some national GDPs. Multinational corporations can have a powerful influence in local economies as well as the world economy and play an important role in international relations and globalization. The presence of such powerful players in the world economy is reason for much controversy.

Market imperfections

It may seem strange that a corporation can decide to do business in a different country, where it doesn't know the laws, local customs or business practices. Why is it not more efficient to combine assets of value overseas with local factors of production at lower costs by renting or selling them to local investors?

One reason is that the use of the market for coordinating the behaviour of agents located in different countries is less efficient than coordinating them by a multinational enterprise as an institution. The additional costs caused by the entrance in foreign markets are of less interest for the local enterprise. According to Hymer, Kindleberger and Caves, the existence of MNEs is reasoned by structural market imperfections for final products. In Hymer's example, there are considered two firms as monopolists in their own market and isolated from competition by transportation costs and other tariff and non-tariff barriers. If these costs decrease, both are forced to competition; which will reduce their profits. The firms can maximize their joint income by a merger or acquisition which will lower the competition in the shared market. Due to the transformation of two separated companies into one MNE the pecuniary externalities are going to be internalized. However, this doesn't mean that there is an improvement for the society. This could also be the case if there are few substitutes or limited licenses in a foreign market. The consolidation is often established by acquisition, merger or the vertical integration of the potential licensee into overseas manufacturing. This makes it easy for the MNE to enforce price discrimination schemes in various countries. Therefore Humyer considered the emergence of multinational firms as "an (negative) instrument for restraining competition between firms of different nations".Market imperfections had been considered by Hymer as structural and caused by the deviations from perfect competition in the final product markets. Further reasons are originated from the control of proprietary technology and distribution systems, scale economies, privileged access to inputs and product differentiation. In the absence of these factors, market are fully efficient.The transaction costs theories of MNEs had been developed simultaneously and independently by McManus (1972), Buckley & Casson (1976), Brown (1976) and Hennart (1977, 1982). All these authors

claimed that market imperfections are inherent conditions in markets and MNEs are institutions which try to bypass these imperfections. The imperfections in markets are natural as the neoclassical assumptions like full knowledge and enforcement don't exist in real markets.

International power

Tax competition

Multinational corporations have played an important role in globalization. Countries and sometimes subnational regions must compete against one another for the establishment of MNC facilities, and the subsequent tax revenue, employment, and economic activity. To compete, countries and regional political districts sometimes offer incentives to MNCs such as tax breaks, pledges of governmental assistance or improved infrastructure, or lax environmental and labor standards enforcement. This process of becoming more attractive to foreign investment can be characterized as a race to the bottom, a push towards greater autonomy for corporate bodies, or both.

However, some scholars for instance the Columbia economist Jagdish Bhagwati, have argued that multinationals are engaged in a 'race to the top.' While multinationals certainly regard a low tax burden or low labor costs as an element of comparative advantage, there is no evidence to suggest that MNCs deliberately avail themselves of lax environmental regulation or poor labour standards. As Bhagwati has pointed out, MNC profits are tied to operational efficiency, which includes a high degree of standardization. Thus, MNCs are likely to tailor production processes in all of their operations in conformity to those jurisdictions where they operate (which will almost always include one or more of the US, Japan or EU) which has the most rigorous standards. As for labor costs, while MNCs clearly pay workers in, e.g. Vietnam, much less than they would in the US (though it is worth noting that higher American productivity—linked to technology—means that any comparison is tricky, since in America the same company would probably hire far fewer people and automate whatever process they performed in Vietnam with manual labour), it is also the case that they tend to pay a premium of between 10% and 100% on local labor rates. Finally, depending on the nature of the MNC, investment in any country reflects a desire for a long-term return. Costs associated with establishing plant, training workers, etc., can be very high; once established in a jurisdiction, therefore, many MNCs are quite vulnerable to predatory practices such as, e.g., expropriation, sudden contract renegotiation, the arbitrary withdrawal or compulsory purchase of unnecessary 'licenses,' etc. Thus, both the negotiating power of MNCs and the supposed 'race to the bottom' may be overstated, while the substantial benefits which MNCs bring (tax revenues aside) are often understated.

Market withdrawal

Because of their size, multinationals can have a significant impact on government policy, primarily through the threat of market withdrawal.For example, in an effort to reduce health care costs, some countries have tried to force pharmaceutical companies to license their patented drugs to local competitors for a very low fee,

thereby artificially lowering the price. When faced with that threat, multinational pharmaceutical firms have simply withdrawn from the market, which often leads to limited availability of advanced drugs. In these cases, governments have been forced to back down from their efforts. Similar corporate and government confrontations have occurred when governments tried to force MNCs to make their intellectual property public in an effort to gain technology for local entrepreneurs. When companies are faced with the option of losing a core competitive technological advantage or withdrawing from a national market, they may choose the latter. This withdrawal often causes governments to change policy. Countries that have been the most successful in this type of confrontation with multinational corporations are large countries such as United States and Brazil , which have viable indigenous market competitors.

Lobbying

Multinational corporate lobbying is directed at a range of business concerns, from tariff structures to environmental regulations. There is no unified multinational perspective on any of these issues. Companies that have invested heavily in pollution control mechanisms may lobby for very tough environmental standards in an effort to force non-compliant competitors into a weaker position. Corporations lobby tariffs to restrict competition of foreign industries. For every tariff category that one multinational wants to have reduced, there is another multinational that wants the tariff raised. Even within the U.S. auto industry, the fraction of a company's imported components will vary, so some firms favor tighter import restrictions, while others favor looser ones. Says Ely Oliveira, Manager Director of the MCT/IR: This is very serious and is very hard and takes a lot of work for the owner.

Multinational corporations such as Wal-mart and McDonald's benefit from government zoning laws, to create barriers to entry.

Many industries such as General Electric and Boeing lobby the government to receive subsidies to preserve their monopoly.

Patents

Many multinational corporations hold patents to prevent competitors from arising. For example, Adidas holds patents on shoe designs, Siemens A.G. holds many patents on equipment and infrastructure and Microsoft benefits from software patents The pharmaceutical companies lobby international agreements to enforce patent laws on others.

Government power

In addition to efforts by multinational corporations to affect governments, there is much government action intended to affect corporate behavior. The threat of nationalization (forcing a company to sell its local assets to the government or to other local nationals) or changes in local business laws and regulations can limit a multinational's power. These issues become of increasing importance because of the emergence of MNCs in developing countries.

Micro-multinationals

Enabled by Internet based communication tools, a new breed of multinational companies is growing in numbers."How startups go global". http://money.cnn.com/2006/06/28/magazines/business2/startupsgoglobal.biz2/index.htm. These multinationals start operating in different countries from the very early stages. These companies are being called micro-multinationals. What differentiates micro-multinationals from the large MNCs is the fact that they are small businesses. Some of these micro-multinationals, particularly software development companies, have been hiring employees in multiple countries from the beginning of the Internet era. But more and more micro-multinationals are actively starting to market their products and services in various countries. Internet tools like Google, Yahoo, MSN, Ebay and Amazon make it easier for the micro-multinationals to reach potential customers in other countries.

Service sector micro-multinationals, like Indigo Design & Engineering Associates Pvt. Ltd. Facebook, Alibaba etc. started as dispersed virtual businesses with employees, clients and resources located in various countries. Their rapid growth is a direct result of being able to use the internet, cheaper telephony and lower traveling costs to create unique business opportunities

Criticism of multinationals

The rapid rise of multinational corporations has been a topic of concern among intellectuals, activists and laypersons who have seen it as a threat of such basic civil rights as privacy. They have pointed out that multinationals create false needs in consumers and have had a long history of interference in the policies of sovereign nation states. Evidence supporting this belief includes invasive advertising (such as billboards, television ads, adware, spam, telemarketing, child-targeted advertising, guerilla marketing), massive corporate campaign contributions in democratic elections, and endless global news stories about corporate corruption (Martha Stewart and Enron, for example). Anti-corporate protesters suggest that corporations answer only to shareholders, giving human rights and other issues almost no consideration.[15] Films and books critical of multinationals include *Surplus: Terrorized into Being Consumers*, *The Corporation*, *The Shock Doctrine*, *Downsize This* and others.

World Trade Organization

Location of the WTO headquarters in Geneva

The **World Trade Organization** (**WTO**) is an international organization designed by its founders to supervise and liberalize international capital trade. The organization officially commenced on January 1, 1995 under the Marrakesh Agreement, replacing

the General Agreements on Tariffs and Trade (GATT), which commenced in 1947. The World Trade Organization deals with regulation of trade between participating countries; it provides a framework for negotiating and formalising trade agreements, and a dispute resolution process aimed at enforcing participants' adherence to WTO agreements which are signed by representatives of member governments and ratified by their parliaments. Most of the issues that the WTO focuses on derive from previous trade negotiations, especially from the Uruguay Round (1986-1994). The organization is currently endeavouring to persist with a trade negotiation called the Doha Development Agenda (or Doha Round), which was launched in 2001 to enhance equitable participation of poorer countries which represent a majority of the world's population. However, the negotiation has been dogged by "disagreement between exporters of agricultural bulk commodities and countries with large numbers of subsistence farmers on the precise terms of a 'special safeguard measure' to protect farmers from surges in imports. At this time, the future of the Doha Round is uncertain."

The WTO has 153 members,

representing more than 95% of total world trade and 30 bservers, most seeking membership. The WTO is governed by a ministerial conference, meeting every two years; a general council, which implements the conference's policy decisions and is responsible for day-to-day administration; and a director-general, who is appointed by the ministerial conference. The WTO's headquarters is at the Centre William Rappard, Geneva, Switzerland.

Harry Dexter White (l) and John Maynard Keynes at the Bretton Woods Conference – Both economists had been strong advocates of a liberal international trade environment, and recommended the establishment of three institutions: the IMF (fiscal and monetary issues), the World Bank (financial and structural issues), and the ITO (international economic cooperation).

The WTO's predecessor, the General Agreement on Tariffs and Trade (GATT), was established after World War II in the wake of other new multilateral institutions dedicated to international economic cooperation - notably the Bretton Woods institutions known as the World Bank and the International Monetary Fund. A comparable international institution for trade, named the International Trade Organization was successfully negotiated. The ITO was to be a United Nations specialized agency and would address not only trade barriers but other issues indirectly related to trade, including employment, investment, restrictive business practices, and commodity agreements. But the ITO treaty was not approved by the United States and a few other signatories and never went into effect.

In the absence of an international organization for trade, the GATT would over the years "transform itself" into a *de facto* international organization.

GATT rounds of negotiations

General Agreement on Tariffs and Trade

The GATT was the only multilateral instrument governing international trade from 1948 until the WTO was established in 1995. Despite attempts in the mid 1950s and 1960s to create some form of institutional mechanism for international trade, the GATT continued to operate for almost half a century as a semi-institutionalized multilateral treaty regime on a provisional basis.

From Geneva to Tokyo

Seven rounds of negotiations occurred under the GATT. The first GATT trade rounds concentrated on further reducing tariffs. Then, the Kennedy Round in the mid-sixties brought about a GATT anti-dumping Agreement and a section on development. The Tokyo Round during the seventies was the first major attempt to tackle trade barriers that do not take the form of tariffs, and to improve the system, adopting a series of agreements on non-tariff barriers, which in some cases interpreted existing GATT rules, and in others broke entirely new ground. Because these plurilateral agreements were not accepted by the full GATT membership, they were often informally called "codes". Several of these codes were amended in the Uruguay Round, and turned into multilateral commitments accepted by all WTO members. Only four remained plurilateral (those on government procurement, bovine meat, civil aircraft and dairy products), but in 1997 WTO members agreed to terminate the bovine meat and dairy agreements, leaving only two.

WTO Ministerial Conference of 2001

Was held in Doha In Persian Gulf nation of Qatar. The Doha Development Round was launched at the conference. The conference also approved the joining of China, which became the 143rd member to join.

Fifth ministerial conference

WTO Ministerial Conference of 2003

The ministerial conference was held in Cancún, Mexico, aiming at forging agreement on the Doha round. An alliance of 22 southern states, the G20 developing nations (led by India, China[22] and Brazil), resisted demands from the North for agreements on the so-called "Singapore issues" and called for an end to agricultural subsidies within the EU and the US. The talks broke down without progress.

Sixth ministerial conference

For more details on this topic, see WTO Ministerial Conference of 2005.

The sixth WTO ministerial conference was held in Hong Kong from 13 December – 18 December 2005. It was considered vital if the four-year-old Doha Development Agenda negotiations were to move forward sufficiently to conclude the round in 2006. In this meeting, countries agreed to phase out all their agricultural export subsidies by the end of 2013, and terminate any cotton export subsidies by the end

of 2006. Further concessions to developing countries included an agreement to introduce duty free, tariff free access for goods from the Least Developed Countries, following the Everything But Arms initiative of the European Union — but with up to 3% of tariff lines exempted. Other major issues were left for further negotiation to be completed by the end of 2010

Seventh ministerial conference

The WTO General Council, on 26 May 2009, agreed to hold a seventh WTO ministerial conference session in Geneva from 30 November–December 2009. A statement by chairman Amb. Mario Matus acknowledged that the prime purpose was to remedy a breach of protocol requiring two-yearly "regular" meetings, which had lapsed with the Doha Round failure in 2005, and that the "scaled-down" meeting would not be a negotiating session, but "emphasis will be on transparency and open discussion rather than on small group processes and informal negotiating structures".

Functions

Among the various functions of the WTO, these are regarded by analysts as the most important:

- It oversees the implementation, administration and operation of the covered agreements.
- It provides a forum for negotiations and for settling disputes. Additionally, it is the WTO's duty to review and propagate the national trade policies, and to ensure the coherence and transparency of trade policies through surveillance in global economic policy-making. Another priority of the WTO is the assistance of developing, least-developed and low-income countries in transition to adjust to WTO rules and disciplines through technical cooperation and training. The WTO is also a center of economic research and analysis: regular assessments of the global trade picture in its annual publications and research reports on specific topics are produced by the organization. Finally, the WTO cooperates closely with the two other components of the Bretton Woods system, the IMF and the World Bank.

Principles of the trading system

The WTO establishes a framework for trade policies; it does not define or specify outcomes. That is, it is concerned with setting the rules of the trade policy games. Five principles are of particular importance in understanding both the pre-1994 GATT and the WTO:

1. **Non-Discrimination**. It has two major components: the most favored nation (MFN) rule, and the national treatment policy. Both are embedded in the main WTO rules on goods, services, and intellectual property, but their precise scope and nature differ across these areas. The MFN rule requires that a WTO member must apply the same conditions on all trade with other WTO members, i.e. a WTO member has to grant the most favorable conditions

under which it allows trade in a certain product type to all other WTO members. "Grant someone a special favor and you have to do the same for all other WTO members." National treatment means that imported and locally-produced goods should be treated equally (at least after the foreign goods have entered the market) and was introduced to tackle non-tariff barriers to trade (e.g. technical standards, security standards et al. discriminating against imported goods).

2. **Reciprocity**. It reflects both a desire to limit the scope of free-riding that may arise because of the MFN rule, and a desire to obtain better access to foreign markets. A related point is that for a nation to negotiate, it is necessary that the gain from doing so be greater than the gain available from unilateral liberalization; reciprocal concessions intend to ensure that such gains will materialize.
3. **Binding and enforceable commitments**. The tariff commitments made by WTO members in a multilateral trade negotiation and on accession are enumerated in a schedule (list) of concessions. These schedules establish "ceiling bindings": a country can change its bindings, but only after negotiating with its trading partners, which could mean compensating them for loss of trade. If satisfaction is not obtained, the complaining country may invoke the WTO dispute settlement procedures.
4. **Transparency**. The WTO members are required to publish their trade regulations, to maintain institutions allowing for the review of administrative decisions affecting trade, to respond to requests for information by other members, and to notify changes in trade policies to the WTO. These internal transparency requirements are supplemented and facilitated by periodic country-specific reports (trade policy reviews) through the Trade Policy Review Mechanism (TPRM). The WTO system tries also to improve predictability and stability, discouraging the use of quotas and other measures used to set limits on quantities of imports.
5. **Safety valves**. In specific circumstances, governments are able to restrict trade. There are three types of provisions in this direction: articles allowing for the use of trade measures to attain noneconomic objectives; articles aimed at ensuring "fair competition"; and provisions permitting intervention in trade for economic reasons. Exceptions to the MFN principle also allow for preferential treatment of developing countries, regional free trade areas and customs unions. There are 11 committees under the jurisdiction of the Goods Council each with a specific task. All members of the WTO participate in the committees. The Textiles Monitoring Body is separate from the other committees but still under the jurisdiction of Goods Council. The body has its own chairman and only ten members. The body also has several groups relating to textiles.

Council for Trade-Related Aspects of Intellectual Property Rights

Information on intellectual property in the WTO, news and official records of the activities of the TRIPS Council, and details of the WTO's work with other international organizations in the field.

Council for Trade in Services

The Council for Trade in Services operates under the guidance of the General Council and is responsible for overseeing the functioning of the General Agreement on Trade in Services (GATS). It is open to all WTO members, and can create subsidiary bodies as required. The Service Council has three subsidiary bodies: financial services, domestic regulations, GATS rules and specific commitments.

Other committees

The General council has several different committees, working groups, and working parties.

Committees on

- Trade and Environment
- Trade and Development (Subcommittee on Least-Developed Countries)
- Regional Trade Agreements
- Balance of Payments Restrictions
- Budget, Finance and Administration

Working parties on

- Accession

Working groups on

- Trade, debt and finance
- Trade and technology transfer

Trade Negotiations Committee

The Trade Negotiations Committee (TNC) is the committee that deals with the current trade talks round. The chair is WTO's director-general. The committee is currently tasked with the Doha Development Round.

Voting system

The WTO operates on a *one country, one vote* system, but actual votes have never been taken. Decision making is generally by consensus, and relative market size is the primary source of bargaining power. The advantage of consensus decision-making is that it encourages efforts to find the most widely acceptable decision. Main disadvantages include large time requirements and many rounds of negotiation to develop a consensus decision, and the tendency for final agreements to use ambiguous language on contentious points that makes future interpretation of treaties difficult.

In reality, WTO negotiations proceed not by consensus of all members, but by a process of informal negotiations between small groups of countries. Such negotiations are often called "Green Room" negotiations (after the colour of the WTO Director-General's Office in Geneva), or "Mini-Ministerials", when they occur in other

countries. These processes have been regularly criticised by many of the WTO's developing country members which are often totally excluded from the negotiations.

Richard Harold Steinberg (2002) argues that although the WTO's consensus governance model provides law-based initial bargaining, trading rounds close through power-based bargaining favouring Europe and the United States, and may not lead to Pareto improvement.

Dispute settlement

In 1994, the WTO members agreed on the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU) annexed to the "Final Act" signed in Marrakesh in 1994.Dispute settlement is regarded by the WTO as the central pillar of the multilateral trading system, and as a "unique contribution to the stability of the global economy·WTO members have agreed that, if they believe fellow-members are violating trade rules, they will use the multilateral system of settling disputes instead of taking action unilaterally.

The operation of the WTO dispute settlement process involves the DSB panels, the Appellate Body, the WTO Secretariat, arbitrators, independent experts and several specialized institution·

Accession and membership

The process of becoming a WTO member is unique to each applicant country, and the terms of accession are dependent upon the country's stage of economic development and current trade regime. The process takes about five years, on average, but it can last more if the country is less than fully committed to the process or if political issues interfere· As is typical of WTO procedures, an offer of accession is only given once consensus is reached among interested parties.

Members and observers

The WTO has 153 members (almost all of the 123 nations participating in the Uruguay Round signed on at its foundation, and the rest had to get membership).The 27 states of the European Union are represented also as the European Communities. WTO members do not have to be full sovereign nation-members. Instead, they must be a customs territory with full autonomy in the conduct of their external commercial relations. Thus Hong Kong (as "Hong Kong, China" since 1997) became a GATT contracting party, and the Republic of China (ROC) (commonly known as Taiwan, whose sovereignty has been disputed by the People's Republic of China) acceded to the WTO in 2002 under the name of "Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu" (Chinese Taipei). A number of non-members (30) are observers at WTO proceedings and are currently negotiating their membership. As observers, Iran, Iraq and Russia are not yet members. With the exception of the Holy See, observers must start accession negotiations within five years of becoming observers. Some international

intergovernmental organizations are also granted observer status to WTO bodies. 14 states and 2 territories so far have no official interaction with the WTO.

Agreements

The WTO oversees about 60 different agreements which have the status of international legal texts. Member countries must sign and ratify all WTO agreements on accession

Some of the important agreements

- **Agreement on Agriculture (AoA)**

The Agreement on Agriculture came into effect with the establishment of the WTO at the beginning of 1995. The AoA has three central concepts, or "pillars": domestic support, market access and export subsidies.

- **General Agreement on Trade in Services (GATS)**

The General Agreement on Trade in Services was created to extend the multilateral trading system to service sector, in the same way the General Agreement on Tariffs and Trade (GATT) provides such a system for merchandise trade. The Agreement entered into force in January 1995

- **Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPs)**

The Agreement on Trade-Related Aspects of Intellectual Property Rights sets down minimum standards for many forms of intellectual property (IP) regulation. It was negotiated at the end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1994.

- **Sanitary and Phyto-Sanitary (SPS) Agreement**

The Agreement on the Application of Sanitary and Phytosanitary Measures - also known as the SPS Agreement was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade, and entered into force with the establishment of the WTO at the beginning of 1995.

Under the SPS agreement, the WTO sets constraints on members' policies relating to food safety (bacterial contaminants, pesticides, inspection and labelling) as well as animal and plant health (imported pests and diseases).

- **Agreement on Technical Barriers to Trade (TBT)**

The Agreement on Technical Barriers to Trade is an international treaty of the World Trade Organization. It was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade, and entered into force with the establishment of the WTO at the end of 1994.

The object ensures that technical negotiations and standards, as well as testing and certification procedures, do not create unnecessary obstacles to trade".

Criticism The stated aim of the WTO is to promote free trade and stimulate economic growth. Critics argue that free trade leads to a divergence instead of convergence of income levels within rich and poor countries (the rich get richer and the poor get poorer) .Martin Khor, Director of the Third World Network, argues that the WTO does not manage the global economy impartially, but in its operation has a systematic bias toward rich countries and multinational corporations, harming smaller countries which have less negotiation power. He argues that developing countries have not benefited from the WTO agreements of the Uruguay Round because, among other reasons, market access in industry has not improved; these countries have had no gains yet from the phasing-out of textile quotas; non-tariff barriers such as anti-dumping measures have increased; and domestic support and export subsidies for agricultural products in the rich countries remain high. Jagdish Bhagwati asserts, however, that there is greater tariff protection on manufacturers in the poor countries, which are also overtaking the rich nations in the number of anti-dumping filings.

Other critics claim that the issues of labor relations and environment are steadfastly ignored. Steve Charnovitz, former director of the Global Environment and Trade Study (GETS), believes that the WTO "should begin to address the link between trade and labor and environmental concerns." Further, labor unions condemn the labor rights record of developing countries, arguing that, to the extent the WTO succeeds at promoting globalization, the environment and labor rights suffer in equal measure On the other side, Khor responds that "if environment and labor were to enter the WTO system [...] it would be conceptually difficult to argue why other social and cultural issues should also not enter."Bhagwati is also critical towards "rich-country lobbies seeking on imposing their unrelated agendas on trade agreements." Therefore, both Bhagwati and Arvind Panagariya of Columbia University, have criticized the introduction of TRIPs into the WTO framework, fearing that such non-trade agendas might overwhelm the organization's function.

Other critics have characterized the decision making in the WTO as complicated, ineffective, unrepresentative and non-inclusive, and they have proposed the establishment of a small, informal steering committee (a "consultative board") that can be delegated responsibility for developing consensus on trade issues among the member countries.The Third World Network has called the WTO "the most non-transparent of international organisations", because "the vast majority of developing countries have very little real say in the WTO system"; the Network stresses that "civil society groups and institutions must be given genuine opportunities to express their views and to influence the outcome of policies and decisions."Certain non-governmental organizations, such as the World Federalist Movement, argue that democratic participation in the WTO could be enhanced through the creation of a parliamentary assembly, although other analysts have characterized this proposal as ineffective.Some libertarians and small-government conservatives, as well as think tanks such as the Ludwig von Mises Institute, oppose the World Trade Organization, seeing it as a bureaucratic and anti-capitalistic organization not promoting free

trade, but political interventionism. The chairman of the Ludwig von Mises Institute, Llewellyn H Rockwell Jr, argued that

. . . the World Trade Organization says that the US must stop permitting US exporters to set up foreign subsidiaries that save as much as 30 percent in taxes they would otherwise pay. Now the US must either raise taxes by eliminating loopholes or face massive new sanctions that will seriously harm our export sector. [...] There's been a lot of talk recently about foreigners who hate our prosperity and civilization, and seek ways to inflict violence in retaliation. Well, here's another case in point, except these are not swarthy Islamic terrorists; they are diplomats and statesmen on nobody's list of suspicious characters.

Course Name: Globalization Debates and Events

Globalization (or **globalisation**) describes an ongoing process by which regional economies, societies, and cultures have become integrated through a globe-spanning network of communication and exchange. The term is sometimes used to refer specifically to economic globalization: the integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology. However, globalization is usually recognized as being driven by a combination of economic, technological, sociocultural, political, and biological factors.[2] The term can also refer to the transnational circulation of ideas, languages, or popular culture.

Definitions

An early description of globalization was penned by the American entrepreneur-turned-minister Charles Taze Russell who coined the term 'corporate giants' in 1897. However, it was not until the 1960s that the term began to be widely used by economists and other social scientists. It had achieved widespread use in the mainstream press by the later half of the 1980s. Since its inception, the concept of globalization has inspired numerous competing definitions and interpretations.

The United Nations ESCWA has written that globalization "is a widely-used term that can be defined in a number of different ways. When used in an economic context, it refers to the reduction and removal of barriers between national borders in order to facilitate the flow of goods, capital, services and labour... although considerable barriers remain to the flow of labour.... Globalization is not a new phenomenon. It began in the late nineteenth century, but its spread slowed during the period from the start of the First World War until the third quarter of the twentieth century. This slowdown can be attributed to the inwardlooking policies pursued by a number of countries in order to protect their respective industries.. however, the pace of globalization picked up rapidly during the fourth quarter of the twentieth century....

Saskia Sassen writes that "a good part of globalization consists of an enormous variety of micro-processes that begin to denationalize what had been constructed as national — whether policies, capital, political subjectivities, urban spaces, temporal frames, or any other of a variety of dynamics and domains."

Tom G. Palmer of the Cato Institute defines globalization as "the diminution or elimination of state-enforced restrictions on exchanges across borders and the increasingly integrated and complex global system of production and exchange that has emerged as a result."[7]

Thomas L. Friedman has examined the impact of the "flattening" of the world, and argues that globalized trade, outsourcing, supply-chaining, and political forces have changed the world permanently, for both better and worse. He also argues that the pace of globalization is quickening and will continue to have a growing impact on business organization and practice.[8]

Noam Chomsky argues that the word globalization is also used, in a doctrinal sense, to describe the neoliberal form of economic globalization.[11]

Herman E. Daly argues that sometimes the terms internationalization and globalization are used interchangeably but there is a significant formal difference. The term "internationalization" (or internationalisation) refers to the importance of international trade, relations, treaties etc. owing to the (hypothetical) immobility of labor and capital between or among nations.

Adrián Ravier of the Hayek Foundation summarize the globalization as such the process that arises spontaneously in the market and acts by developing a progressive international division of labour, eliminating restrictions on individual liberties, reducing transportation and communication costs, and increasingly integrating the individuals that compose the “great society.”

Finally, Takis Fotopoulos argues that globalisation is the result of systemic trends manifesting the market economy’s grow-or-die dynamic, following the rapid expansion of transnational corporations. Because these trends have not been offset effectively by counter-tendencies that could have emanated from trade-union action and other forms of political activity, the outcome has been globalisation. This is a multi-faceted and irreversible phenomenon within the system of the market economy and it is expressed as: economic globalisation, namely, the opening and deregulation of commodity, capital and labour markets which led to the present form of neoliberal globalisation; political globalisation, i.e., the emergence of a transnational elite and the phasing out of the all powerful-nation state of the statist period; cultural globalisation, i.e., the worldwide homogenisation of culture; ideological globalisation; technological globalisation; social globalisation.

History

The historical origins of globalization are the subject of on-going debate. Though some scholars situate the origins of globalization in the modern era, others regard it as a phenomenon with a long history.

Perhaps the most extreme proponent of a deep historical origin for globalization was Andre Gunder Frank, an economist associated with dependency theory. Frank argued that a form of globalization has been in existence since the rise of trade links between Sumer and the Indus Valley Civilization in the third millenium B.C. Critics of this idea point out that it rests upon an overly-broad definition of globalization.

Others have perceived an early form of globalization in the trade links between the Roman Empire, the Parthian Empire, and the Han Dynasty. The increasing articulation of commercial links between these powers inspired the development of the Silk Road, which started in western China, reached the boundaries of the Parthian empire, and continued onwards towards Rome.

The Islamic Golden Age was also an important early stage of globalization, when Jewish and Muslim traders and explorers established a sustained economy across the Old World resulting in a globalization of crops, trade, knowledge and technology.

Globally significant crops such as sugar and cotton became widely cultivated across the Muslim world in this period, while the necessity of learning Arabic and completing the Hajj created a cosmopolitan culture.

The advent of the Mongol Empire, though destabilizing to the commercial centers of the Middle East and China, greatly facilitated travel along the Silk Road. This permitted travelers and missionaries such as Marco Polo to journey successfully (and profitably) from one end of Eurasia to the other. The so-called Pax Mongolica of the thirteenth century had several other notable globalizing effects. It witnessed the creation of the first international postal service, as well as the rapid transmission of epidemic diseases such as bubonic plague across the newly-unified regions of Central Asia.[17] These pre-modern phases of global or hemispheric exchange are sometimes known as archaic globalization. Up to the sixteenth century, however, even the largest systems of international exchange were limited to the Old World.

The Age of Discovery brought a broad change in globalization, being the first period in which Eurasia and Africa engaged in substantial cultural, material and biologic exchange with the New World. [18] It begun in the late 15th century, when the two Kingdoms of the Iberian Peninsula - Portugal and Castile - sent the first exploratory voyages[19] around the Horn of Africa and to the Americas, "discovered" in 1492 by Christopher Columbus. Shortly before the turn of the 16th century, Portuguese started establishing trading posts (factories) from Africa to Asia and Brazil, to deal with the trade of local products like gold, spices and timber, introducing an international business center under a royal monopoly, the House of India[20]. Global integration continued with the European colonization of the Americas initiating the Columbian Exchange[21], the enormous widespread exchange of plants, animals, foods, human populations (including slaves), communicable diseases, and culture between the Eastern and Western hemispheres. It was one of the most significant global events concerning ecology, agriculture, and culture in history.

This phase is sometimes known as proto-globalization. It was characterized by the rise of maritime European empires, in the 16th and 17th centuries, first the Portuguese and Spanish Empires, and later the Dutch and British Empires. In the 17th century, globalization became also a private business phenomenon when chartered companies like British East India Company (founded in 1600), often described as the first multinational corporation, as well as the Dutch East India Company (founded in 1602) were established. Because of the large investment and financing needs and high risks involved in international trade, the British East India Company became the first company in the world to share risk and enable joint ownership of companies through the issuance of shares of stock: an important driver for globalization.[*citation needed*]

Great Britain grew rich in the 19th century as the first global economic superpower, because of its superior manufacturing technology and improved global communications such as steamships and railroads.

The 19th century witnessed the advent of globalization approaching its modern form. Industrialization allowed cheap production of household items using economies of scale, while rapid population growth created sustained demand for commodities. Globalization in this period was decisively shaped by nineteenth-century imperialism. After the Opium Wars and the completion of British conquest of India, vast populations of these regions became ready consumers of European exports. It was in this period that areas of sub-Saharan Africa and the Pacific islands were incorporated into the world system. Meanwhile, the conquest of new parts of the globe, notably sub-Saharan Africa, by Europeans yielded valuable natural resources such as rubber, diamonds and coal and helped fuel trade and investment between the European imperial powers, their colonies, and the United States.[*citation needed*] Said John Maynard Keynes,

> “ The inhabitant of London could order by telephone, sipping his morning tea, the various products of the whole earth, and reasonably expect their early delivery upon his doorstep. Militarism and imperialism of racial and cultural rivalries were little more than the amusements of his daily newspaper. What an extraordinary episode in the economic progress of man was that age which came to an end in August 1914. ”

The first phase of "modern globalization" began to break down at the beginning of the 20th century, with the first World War. The novelist VM Yeates criticised the financial forces of globalisation as a factor in creating World War I. [23]The final death knell for this phase came during the gold standard crisis and Great Depression in the late 1920s and early 1930s.[*citation needed*]

In the middle decades of the twentieth century globalization was largely driven by the global expansion of multinational corporations based in the United States and Europe, and worldwide exchange of new developments in science, technology and products, with most significant inventions of this time having their origins in the Western world according to Encyclopedia Britannica.[24]. Worldwide export of western culture went through the new mass media: film, radio and television and recorded music. Development and growth of international transport and telecommunication played a decisive role in modern globalization.

In late 2000s, much of the industrialized world entered into a deep recession.[25] Some analysts say the world is going through a period of deglobalization after years of increasing economic integration.[26][27] Up to 45% of global wealth had been destroyed by the global financial crisis in little less than a year and a half.[28] China has recently become the world’s largest exporter surpassing Germany.[29]

Modern globalization

Globalization, since World War II, is largely the result of planning by politicians to break down borders hampering trade to increase prosperity and interdependence thereby decreasing the chance of future war[*citation needed*]. Their work led to the Bretton Woods conference, an agreement by the world's leading politicians to lay down the framework for international commerce and finance, and the founding of several international institutions intended to oversee the processes of globalization.

These institutions include the International Bank for Reconstruction and Development (the World Bank), and the International Monetary Fund. Globalization has been facilitated by advances in technology which have reduced the costs of trade, and trade negotiation rounds, originally under the auspices of the General Agreement on Tariffs and Trade (GATT), which led to a series of agreements to remove restrictions on free trade.

Since World War II, barriers to international trade have been considerably lowered through international agreements — GATT. Particular initiatives carried out as a result of GATT and the World Trade Organization (WTO), for which GATT is the foundation, have included:

- Promotion of free trade:
  - elimination of tariffs; creation of free trade zones with small or no tariffs
  - Reduced transportation costs, especially resulting from development of containerization for ocean shipping.
  - Reduction or elimination of capital controls
  - Reduction, elimination, or harmonization of subsidies for local businesses
  - Creation of subsidies for global corporations
  - Harmonization of intellectual property laws across the majority of states, with more restrictions
  - Supranational recognition of intellectual property restrictions (e.g. patents granted by China would be recognized in the United States)

Cultural globalization, driven by communication technology and the worldwide marketing of Western cultural industries, was understood at first as a process of homogenization, as the global domination of American culture at the expense of traditional diversity. However, a contrasting trend soon became evident in the emergence of movements protesting against globalization and giving new momentum to the defense of local uniqueness, individuality, and identity, but largely without success.

The Uruguay Round (1986 to 1994)[31] led to a treaty to create the WTO to mediate trade disputes and set up a uniform platform of trading. Other bilateral and multilateral trade agreements, including sections of Europe's Maastricht Treaty and the North American Free Trade Agreement (NAFTA) have also been signed in pursuit of the goal of reducing tariffs and barriers to trade.

World exports rose from 8.5% in 1970, to 16.1% of total gross world product in 2001.

Measuring globalization

Looking specifically at economic globalization, demonstrates that it can be measured in different ways. These center around the four main economic flows that characterize globalization:

- Goods and services, e.g., exports plus imports as a proportion of national income or per capita of population
- Labor / people, e.g., net migration rates; inward or outward migration flows, weighted by population
- Capital, e.g., inward or outward direct investment as a proportion of national income or per head of population
- Technology, e.g., international research & development flows; proportion of populations (and rates of change thereof) using particular inventions (especially 'factor-neutral' technological advances such as the telephone, motorcar, broadband)

As globalization is not only an economic phenomenon, a multivariate approach to measuring globalization is the recent index calculated by the Swiss think tank KOF. The index measures the three main dimensions of globalization: economic, social, and political. In addition to three indices measuring these dimensions, an overall index of globalization and sub-indices referring to actual economic flows, economic restrictions, data on personal contact, data on information flows, and data on cultural proximity is calculated. Data is available on a yearly basis for 122 countries, as detailed in Dreher, Gaston and Martens (2008).[33] According to the index, the world's most globalized country is Belgium, followed by Austria, Sweden, the United Kingdom and the Netherlands. The least globalized countries according to the KOF-index are Haiti, Myanmar, the Central African Republic and Burundi.[34]

A.T. Kearney and *Foreign Policy Magazine* jointly publish another Globalization Index. According to the 2006 index, Singapore, Ireland, Switzerland, the Netherlands, Canada and Denmark are the most globalized, while Indonesia, India and Iran are the least globalized among countries listed.

Effects of globalization

Globalization has various aspects which affect the world in several different ways such as:

- *Industrial* - emergence of worldwide production markets and broader access to a range of foreign products for consumers and companies. Particularly movement of material and goods between and within national boundaries. International trade in manufactured goods increased more than 100 times (from $95 billion to $12 trillion) in the 50 years since 1955. China's trade with Africa rose seven-fold during 2000-07 alone.
- *Financial* - emergence of worldwide financial markets and better access to external financing for borrowers. By the early part of the 21st century more than $1.5 trillion in national currencies were traded daily to support the expanded levels of trade and investment. As these worldwide structures grew

more quickly than any transnational regulatory regime, the instability of the global financial infrastructure dramatically increased, as evidenced by the financial crisis of 2007–2009.

As of 2005-2007, the Port of Shanghai holds the title as the World's busiest port.

- *Economic* - realization of a global common market, based on the freedom of exchange of goods and capital. The interconnectedness of these markets, however meant that an economic collapse in any one given country could not be contained.
- *Political* - some use "globalization" to mean the creation of a world government which regulates the relationships among governments and guarantees the rights arising from social and economic globalization. Politically, the United States has enjoyed a position of power among the world powers, in part because of its strong and wealthy economy. With the influence of globalization and with the help of The United States' own economy, the People's Republic of China has experienced some tremendous growth within the past decade. If China continues to grow at the rate projected by the trends, then it is very likely that in the next twenty years, there will be a major reallocation of power among the world leaders. China will have enough wealth, industry, and technology to rival the United States for the position of leading world power.[44]
- *Informational* - increase in information flows between geographically remote locations. Arguably this is a technological change with the advent of fibre optic communications, satellites, and increased availability of telephone and Internet.
- *Language* - the most popular language is Mandarin (845 million speakers) followed by Spanish (329 million speakers) and English (328 million speakers).
    - About 35% of the world's mail, telexes, and cables are in English.
    - Approximately 40% of the world's radio programs are in English.
    - About 50% of all Internet traffic uses English.
- *Competition* - Survival in the new global business market calls for improved productivity and increased competition. Due to the market becoming worldwide, companies in various industries have to upgrade their products and use technology skillfully in order to face increased competition.
- *Ecological* - the advent of global environmental challenges that might be solved with international cooperation, such as climate change, cross-boundary water and air pollution, over-fishing of the ocean, and the spread of invasive species. Since many factories are built in developing countries with less environmental regulation, globalism and free trade may increase pollution. On the other hand, economic development historically required a "dirty" industrial stage, and it is argued that developing countries should not, via regulation, be prohibited from increasing their standard of living.

The construction of continental hotels is a major consequence of globalization process in affiliation with tourism and travel industry, Dariush Grand Hotel, Kish, Iran

- *Cultural* - growth of cross-cultural contacts; advent of new categories of consciousness and identities which embodies cultural diffusion, the desire to

increase one's standard of living and enjoy foreign products and ideas, adopt new technology and practices, and participate in a "world culture". Some bemoan the resulting consumerism and loss of languages. Also see Transformation of culture.
    - Spreading of multiculturalism, and better individual access to cultural diversity (e.g. through the export of Hollywood and, to a lesser extent, Bollywood movies). Some consider such "imported" culture a danger, since it may supplant the local culture, causing reduction in diversity or even assimilation. Others consider multiculturalism to promote peace and understanding between peoples.
    - Greater international travel and tourism. WHO estimates that up to 500,000 people are on planes at any one time. In 2008, there were over 922 million international tourist arrivals, with a growth of 1.9% as compared to 2007.
    - Greater immigration, including illegal immigration. The IOM estimates there are more than 200 million migrants around the world today. Newly available data show that remittance flows to developing countries reached $328 billion in 2008.
    - Spread of local consumer products (e.g., food) to other countries (often adapted to their culture).
    - Worldwide fads and pop culture such as Pokémon, Sudoku, Numa Numa, Origami, Idol series, YouTube, Orkut, Facebook, and MySpace. Accessible to those who have Internet or Television, leaving out a substantial segment of the Earth's population.
    - Worldwide sporting events such as FIFA World Cup and the Olympic Games.
    - Incorporation of multinational corporations in to new media. As the sponsors of the All-Blacks rugby team, Adidas had created a parallel website with a downloadable interactive rugby game for its fans to play and compete.
- *Social* - development of the system of non-governmental organisations as main agents of global public policy, including humanitarian aid and developmental efforts.
- *Technical*
    - Development of a Global Information System, global telecommunications infrastructure and greater transborder data flow, using such technologies as the Internet, communication satellites, submarine fiber optic cable, and wireless telephones
    - Increase in the number of standards applied globally; e.g., copyright laws, patents and world trade agreements.
- *Legal/Ethical*
    - The creation of the international criminal court and international justice movements.
    - Crime importation and raising awareness of global crime-fighting efforts and cooperation.
    - The emergence of Global administrative law.
- *Religious*

- The spread and increased interrelations of various religious groups, ideas, and practices and their ideas of the meanings and values of particular spaces.

Cultural effects

Culture is defined as patterns of human activity and the symbols that give these activities significance. Culture is what people eat, how they dress, beliefs they hold, and activities they practice. Globalization has joined different cultures and made it into something different. As Erla Zwingle, from the National Geographic article titled "Globalization" states, "When cultures receive outside influences, they ignore some and adopt others, and then almost immediately start to transform them."

One classic culture aspect is food. Someone in America can be eating Japanese noodles for lunch while someone in Sydney, Australia is eating classic Italian meatballs. India is known for its curry and exotic spices. France is known for its cheeses. America is known for its burgers and fries. McDonalds is an American company which is now a global enterprise with 31,000 locations worldwide. Those locations include Kuwait, Egypt, and Malta. This company is just one example of food causing cultural influence on the global scale.

Meditation has been a sacred practice for centuries in Indian culture. It calms the body and helps one connect to their inner being while shying away from their conditioned self. There are more Americans meditating and practicing yoga now . Some people are even traveling to India to get the full experience themselves.

Another common practice brought about by globalization is Chinese symbol tattoos. These tattoos are popular with today's younger generation despite the fact that, in China, tattoos are not thought of as cool[58]. Also, the Westerners who get these tattoos often don't know what they mean,[59] making this an example of cultural appropriation.

The internet breaks down cultural boundaries across the world by enabling easy, near-instantaneous communication between people anywhere in a variety of digital forms and media. The Internet is associated with the process of cultural globalization because it allows interaction and communication between people with very different lifestyles and from very different cultures. Photo sharing websites allow interaction even where language would otherwise be a barrier.

Negative effects

Globalization has been one of the most hotly debated topics in international economics over the past few years. Globalization has also generated significant international opposition over concerns that it has increased inequality and environmental degradation. In the Midwestern United States, globalization has eaten away at its competitive edge in industry and agriculture, lowering the quality of life in locations that have not adapted to the change.

Globalization, the flow of information, goods, capital and people across political and geographic boundaries, has also helped to spread some of the deadliest infectious diseases known to humans. Modern modes of transportation allow more people and products to travel around the world at a faster pace, they also open the airways to the transcontinental movement of infectious disease vectors. One example of this occurring is AIDS/HIV.

Opportunities in richer countries drives talent away, leading to brain drains. Brain drain has cost the African continent over $4 billion in the employment of 150,000 expatriate professionals annually. Indian students going abroad for their higher studies costs India a foreign exchange outflow of $10 billion annually.

A study by the World Institute for Development Economics Research at United Nations University reports that the richest 1% of adults alone owned 40% of global assets in the year 2000. The *three* richest people possess more financial assets than the poorest 10% of the world's population, combined [6]. In 2001, 46.4% of people in sub-Saharan Africa were living in extreme poverty.[67] Nearly half of all Indian children are undernourished.[68]

The Worldwatch Institute said the booming economies of China and India are planetary powers that are shaping the global biosphere. In 2007, China has overtaken the United States as the world's biggest producer of CO2.[69] Thriving economies such as China and India are quickly becoming large oil consumers. China has seen oil consumption grow by 8% yearly since 2002, doubling from 1996-2006. Crude oil prices in the last several years have steadily risen from about $25 a barrel in August 2003 to over $140 a barrel in July 2008. The State of the World 2006 report said the two countries' high economic growth hid a reality of severe pollution. The report states:

> *The world's ecological capacity is simply insufficient to satisfy the ambitions of China, India, Japan, Europe and the United States as well as the aspirations of the rest of the world in a sustainable way*

Without more recycling, zinc could be used up by 2037, both indium and hafnium could run out by 2017, and terbium could be gone before 2012. It said that if China and India were to consume as much resources per capita as United States or Japan in 2030 together they would require a full planet Earth to meet their needs. In the longterm these effects can lead to increased conflict over dwindling resources and in the worst case a Malthusian catastrophe.

The head of the International Food Policy Research Institute, stated in 2008 that the gradual change in diet among newly prosperous populations is the most important factor underpinning the rise in global food prices. From 1950 to 1984, as the Green Revolution transformed agriculture around the world, grain production increased by over 250%. The world population has grown by about 4 billion since the beginning of the Green Revolution and most believe that, without the Revolution, there would be greater famine and malnutrition than the UN presently documents (approximately 850 million people suffering from chronic malnutrition in 2005).

It is becoming increasingly difficult to maintain food security in a world beset by a confluence of "peak" phenomena, namely peak oil, peak water, peak phosphorus, peak grain and peak fish. Growing populations, falling energy sources and food shortages will create the "perfect storm" by 2030, according to the UK government chief scientist. He said food reserves are at a 50-year low but the world requires 50% more energy, food and water by 2030. The world will have to produce 70% more food by 2050 to feed a projected extra 2.3 billion people and as incomes rise, the United Nations' Food and Agriculture Organisation (FAO) warned.

The United Nations Office on Drugs and Crime (UNODC) issued a report that the global drug trade generates more than $320 billion a year in revenues. Worldwide, the UN estimates there are more than 50 million regular users of heroin, cocaine and synthetic drugs. The international trade of endangered species is second only to drug trafficking. Traditional Chinese medicine often incorporates ingredients from all parts of plants, the leaf, stem, flower, root, and also ingredients from animals and minerals. The use of parts of endangered species (such as seahorses, rhinoceros horns, saiga antelope horns, and tiger bones and claws) has created controversy and resulted in a black market of poachers who hunt restricted animals.

Sweatshops

It can be said that globalization is the door that opens up an otherwise resource-poor country to the international market. Where a country has little material or physical product harvested or mined from its own soil, large corporations see an opportunity to take advantage of the “export poverty” of such a nation. Where the majority of the earliest occurrences of economic globalization are recorded as being the expansion of businesses and corporate growth, in many poorer nations globalization is actually the result of the foreign businesses investing in the country to take advantage of the lower wage rate: even though investing, by increasing the Capital Stock of the country, increases their wage rate.

One example used by anti-globalization protestors is the use of sweatshops by manufacturers. According to Global Exchange these “Sweat Shops” are widely used by sports shoe manufacturers and mentions one company in particular – Nike.[90] There are factories set up in the poor countries where employees agree to work for low wages. Then if labour laws alter in those countries and stricter rules govern the manufacturing process the factories are closed down and relocated to other nations with more conservative, laissez-faire economic policies.[*citation needed*]

There are several agencies that have been set up worldwide specifically designed to focus on anti-sweatshop campaigns and education of such. In the USA, the National Labor Committee has proposed a number of bills as part of the The Decent Working Conditions and Fair Competition Act, which have thus far failed in Congress. The legislation would legally require companies to respect human and worker rights by prohibiting the import, sale, or export of sweatshop goods.[91]

Specifically, these core standards include no child labor, no forced labor, freedom of association, right to organize and bargain collectively, as well as the right to decent working conditions.

Tiziana Terranova has stated that globalization has brought a culture of "free labour". In a digital sense, it is where the individuals (contributing capital) exploits and eventually "exhausts the means through which labour can sustain itself". For example, in the area of digital media (animations, hosting chat rooms, designing games), where it is often less glamourous than it may sound. In the gaming industry, a Chinese Gold Market has been established.

Pro-globalization (globalism)

Supporters of free trade claim that it increases economic prosperity as well as opportunity, especially among developing nations, enhances civil liberties and leads to a more efficient allocation of resources. Economic theories of comparative advantage suggest that free trade leads to a more efficient allocation of resources, with all countries involved in the trade benefiting. In general, this leads to lower prices, more employment, higher output and a higher standard of living for those in developing countries.

Dr. Francesco Stipo, Director of the USA Club of Rome suggests that “the world government should reflect the political and economic balances of world nations. A world confederation would not supersede the authority of the State governments but rather complement it, as both the States and the world authority would have power within their sphere of competence".

Proponents of laissez-faire capitalism, and some libertarians, say that higher degrees of political and economic freedom in the form of democracy and capitalism in the developed world are ends in themselves and also produce higher levels of material wealth. They see globalization as the beneficial spread of liberty and capitalism.

Supporters of democratic globalization are sometimes called pro-globalists. They believe that the first phase of globalization, which was market-oriented, should be followed by a phase of building global political institutions representing the will of world citizens. The difference from other globalists is that they do not define in advance any ideology to orient this will, but would leave it to the free choice of those citizens via a democratic process[*citation needed*].

Some, such as former Canadian Senator Douglas Roche, O.C., simply view globalization as inevitable and advocate creating institutions such as a directly-elected United Nations Parliamentary Assembly to exercise oversight over unelected international bodies.

Anti-globalization

The "anti-globalization movement" is a term used to describe the political group who oppose the neoliberal version of globalization, while criticisms of globalization are some of the reasons used to justify this group's stance.

"Anti-globalization" may also involve the process or actions taken by a state in order to demonstrate its sovereignty and practice democratic decision-making. Anti-globalization may occur in order to maintain barriers to the international transfer of

people, goods and beliefs, particularly free market deregulation, encouraged by organizations such as the International Monetary Fund or the World Trade Organization. Moreover, as Naomi Klein argues in her book No Logo anti-globalism can denote either a single social movement or an umbrella term that encompasses a number of separate social movements [97] such as nationalists and socialists. In either case, participants stand in opposition to the unregulated political power of large, multi-national corporations, as the corporations exercise power through leveraging trade agreements which in some instances damage the democratic rights of citizens[*citation needed*], the environment particularly air quality index and rain forests[*citation needed*], as well as national government's sovereignty to determine labor rights,[*citation needed*] including the right to form a union, and health and safety legislation, or laws as they may otherwise infringe on cultural practices and traditions of developing countries.[*citation needed*]

Some people who are labeled "anti-globalist" or "sceptics" (Hirst and Thompson) consider the term to be too vague and inaccurate. Podobnik states that "the vast majority of groups that participate in these protests draw on international networks of support, and they generally call for forms of globalization that enhance democratic representation, human rights, and egalitarianism."

Joseph Stiglitz and Andrew Charlton write:

> “ The anti-globalization movement developed in opposition to the perceived negative aspects of globalization. The term 'anti-globalization' is in many ways a misnomer, since the group represents a wide range of interests and issues and many of the people involved in the anti-globalization movement do support closer ties between the various peoples and cultures of the world through, for example, aid, assistance for refugees, and global environmental issues. ”

Some members aligned with this viewpoint prefer instead to describe themselves as the "Global Justice Movement", the "Anti-Corporate-Globalization Movement", the "Movement of Movements" (a popular term in Italy), the "Alter-globalization" movement (popular in France), the "Counter-Globalization" movement, and a number of other terms.

Critiques of the current wave of economic globalization typically look at both the damage to the planet, in terms of the perceived unsustainable harm done to the biosphere, as well as the perceived human costs, such as poverty, inequality, miscegenation, injustice and the erosion of traditional culture which, the critics contend, all occur as a result of the economic transformations related to globalization. They challenge directly the metrics, such as GDP, used to measure progress promulgated by institutions such as the World Bank, and look to other measures, such as the Happy Planet Index,[102] created by the New Economics Foundation[103]. They point to a "multitude of interconnected fatal consequences--social disintegration, a breakdown of democracy, more rapid and extensive deterioration of the environment, the spread of new diseases, increasing poverty and

alienation"[104] which they claim are the unintended but very real consequences of globalization.

The terms globalization and anti-globalization are used in various ways. Noam Chomsky believes that[105][106]

> The term "globalization" has been appropriated by the powerful to refer to a specific form of international economic integration, one based on investor rights, with the interests of people incidental. That is why the business press, in its more honest moments, refers to the "free trade agreements" as "free investment agreements" (Wall St. Journal). Accordingly, advocates of other forms of globalization are described as "anti-globalization"; and some, unfortunately, even accept this term, though it is a term of propaganda that should be dismissed with ridicule. No sane person is opposed to globalization, that is, international integration. Surely not the left and the workers movements, which were founded on the principle of international solidarity — that is, globalization in a form that attends to the rights of people, not private power systems. ”

> The dominant propaganda systems have appropriated the term "globalization" to refer to the specific version of international economic integration that they favor, which privileges the rights of investors and lenders, those of people being incidental. In accord with this usage, those who favor a different form of international integration, which privileges the rights of human beings, become "anti-globalist." This is simply vulgar propaganda, like the term "anti-Soviet" used by the most disgusting commissars to refer to dissidents. It is not only vulgar, but idiotic. Take the World Social Forum, called "anti-globalization" in the propaganda system -- which happens to include the media, the educated classes, etc., with rare exceptions. The WSF is a paradigm example of globalization. It is a gathering of huge numbers of people from all over the world, from just about every corner of life one can think of, apart from the extremely narrow highly privileged elites who meet at the competing World Economic Forum, and are called "pro-globalization" by the propaganda system. An observer watching this farce from Mars would collapse in hysterical laughter at the antics of the educated classes. ”

Critics argue that:

- **Poorer countries suffering disadvantages**: While it is true that globalization encourages free trade among countries, there are also negative consequences because some countries try to save their national markets. The main export of poorer countries is usually agricultural goods. Larger countries often subsidise their farmers (like the EU Common Agricultural Policy), which lowers the market price for the poor farmer's crops compared to what it would be under free trade.[107]
- **Exploitation of foreign impoverished workers**: The deterioration of protections for weaker nations by stronger industrialized powers has resulted

in the exploitation of the people in those nations to become cheap labor. Due to the lack of protections, companies from powerful industrialized nations are able to offer workers enough salary to entice them to endure extremely long hours and unsafe working conditions, though economists question if consenting workers in a competitive employers' market can be decried as "exploited". It is true that the workers are free to leave their jobs, but in many poorer countries, this would mean starvation for the worker, and possible even his/her family if their previous jobs were unavailable.[108]

- **The shift to outsourcing**: The low cost of offshore workers have enticed corporations to buy goods and services from foreign countries. The laid off manufacturing sector workers are forced into the service sector where wages and benefits are low, but turnover is high .[*citation needed*] This has contributed to the deterioration of the middle class[*citation needed*] which is a major factor in the increasing economic inequality in the United States .[*citation needed*] Families that were once part of the middle class are forced into lower positions by massive layoffs and outsourcing to another country. This also means that people in the lower class have a much harder time climbing out of poverty because of the absence of the middle class as a stepping stone.[109]
- **Weak labor unions**: The surplus in cheap labor coupled with an ever growing number of companies in transition has caused a weakening of labor unions in the United States. Unions lose their effectiveness when their membership begins to decline. As a result unions hold less power over corporations that are able to easily replace workers, often for lower wages, and have the option to not offer unionized jobs anymore.[107]
- **Increase exploitation of child labor**: for example, a country that experiencing increases in labor demand because of globalization and an increase the demand for goods produced by children, will experience greater a demand for child labor. This can be "hazardous" or “exploitive”, e.g., quarrying, salvage, cash cropping but also includes the trafficking of children, children in bondage or forced labor, prostitution, pornography and other illicit activities.[110]

In December 2007, World Bank economist Branko Milanovic has called much previous empirical research on global poverty and inequality into question because, according to him, improved estimates of purchasing power parity indicate that developing countries are worse off than previously believed. Milanovic remarks that "literally hundreds of scholarly papers on convergence or divergence of countries' incomes have been published in the last decade based on what we know now were faulty numbers." With the new data, possibly economists will revise calculations, and he also believed that there are considerable implications estimates of global inequality and poverty levels. Global inequality was estimated at around 65 Gini points, whereas the new numbers indicate global inequality to be at 70 on the Gini scale.[111] It is unsurprising that the level of international inequality is so high, as larger sample spaces almost always give a higher level of inequality.

The critics of globalization typically emphasize that globalization is a process that is mediated according to corporate interests, and typically raise the possibility of alternative global institutions and policies, which they believe address the moral claims of poor and working classes throughout the globe, as well as environmental concerns in a more equitable way.[112]

The movement is very broad[citation needed], including church groups, national liberation factions, peasant unionists, intellectuals, artists, protectionists, anarchists, those in support of relocalization and others. Some are reformist, (arguing for a more moderate form of capitalism) while others are more revolutionary (arguing for what they believe is a more humane system than capitalism) and others are reactionary, believing globalization destroys national industry and jobs.

One of the key points made by critics of recent economic globalization is that income inequality, both between and within nations, is increasing as a result of these processes. One article from 2001 found that significantly, in 7 out of 8 metrics, income inequality has increased in the twenty years ending 2001. Also, "incomes in the lower deciles of world income distribution have probably fallen absolutely since the 1980s". Furthermore, the World Bank's figures on absolute poverty were challenged. The article was skeptical of the World Bank's claim that the number of people living on less than $1 a day has held steady at 1.2 billion from 1987 to 1998, because of biased methodology.[113]

A chart that gave the inequality a very visible and comprehensible form, the so-called 'champagne glass' effect,[114] was contained in the 1992 United Nations Development Program Report, which showed the distribution of global income to be very uneven, with the richest 20% of the world's population controlling 82.7% of the world's income.

Economic arguments by fair trade theorists claim that unrestricted free trade benefits those with more financial leverage (i.e. the rich) at the expense of the poor.

Americanization related to a period of high political American clout and of significant growth of America's shops, markets and object being brought into other countries. So globalization, a much more diversified phenomenon, relates to a multilateral political world and to the increase of objects, markets and so on into each others countries.

Critics of globalization talk of Westernization. A 2005 UNESCO report showed that cultural exchange is becoming more frequent from Eastern Asia but . In 2002, China was the third largest exporter of cultural goods, after the UK and US. Between 1994 and 2002, both North America's and the European Union's shares of cultural exports declined, while Asia's cultural exports grew to surpass North America. Related factors are the fact that Asia's population and area are several times that of North America.

Some opponents of globalization see the phenomenon as the promotion of corporatist interests. They also claim that the increasing autonomy and strength of corporate entities shapes the political policy of countries.

International Social Forums

The first WSF in 2001 was an initiative of the administration of Porto Alegre in Brazil. The slogan of the World Social Forum was "Another World Is Possible". It was

here that the WSF's Charter of Principles was adopted to provide a framework for the forums.

The WSF became a periodic meeting: in 2002 and 2003 it was held again in Porto Alegre and became a rallying point for worldwide protest against the American invasion of Iraq. In 2004 it was moved to Mumbai (formerly known as Bombay, in India), to make it more accessible to the populations of Asia and Africa. This last appointment saw the participation of 75,000 delegates.

In the meantime, regional forums took place following the example of the WSF, adopting its Charter of Principles. The first European Social Forum (ESF) was held in November 2002 in Florence. The slogan was "Against the war, against racism and against neo-liberalism". It saw the participation of 60,000 delegates and ended with a huge demonstration against the war (1,000,000 people according to the organizers). The other two ESFs took place in Paris and London, in 2003 and 2004 respectively.

Recently there has been some discussion behind the movement about the role of the social forums. Some see them as a "popular university", an occasion to make many people aware of the problems of globalization. Others would prefer that delegates concentrate their efforts on the coordination and organization of the movement and on the planning of new campaigns. However it has often been argued that in the dominated countries (most of the world) the WSF is little more than an 'NGO fair' driven by Northern NGOs and donors most of which are hostile to popular movements of the poor.[122]

Telecommunication

telecommunication is transmission over a distance for the purpose of communication. In earlier times, this may have involved the use of smoke signals, drums, semaphore, flags or heliograph. In modern times, telecommunication typically involves the use of electronic devices such as the telephone, television, radio or computer. Early inventors in the field of telecommunication include Alexander Graham Bell, Guglielmo Marconi and John Logie Baird. Telecommunication is an important part of the world economy and the telecommunication industry's revenue was estimated to be $1.2 trillion in 2006.

[edit] History

For more details on this topic, see History of telecommunication.

Early telecommunications

In the Middle Ages, chains of beacons were commonly used on hilltops as a means of relaying a signal. Beacon chains suffered the drawback that they could only pass a single bit of information, so the meaning of the message such as "the enemy has been sighted" had to be agreed upon in advance. One notable instance of their use was during the Spanish Armada, when a beacon chain relayed a signal from Plymouth to London signalling the arrival of Spanish ships.[1]

In 1792, Claude Chappe, a French engineer, built the first fixed visual telegraphy system (or semaphore line) between Lille and Paris.[2] However semaphore suffered from the need for skilled operators and expensive towers at intervals of ten to thirty kilometres (six to nineteen miles). As a result of competition from the electrical telegraph, the last commercial line was abandoned in 1880.[3]

Telegraph and telephone

The first commercial electrical telegraph was constructed by Sir Charles Wheatstone and Sir William Fothergill Cooke and opened on 9 April 1839. Both Wheatstone and Cooke viewed their device as "an improvement to the [existing] electromagnetic telegraph" not as a new device.[4]

Samuel Morse independently developed a version of the electrical telegraph that he unsuccessfully demonstrated on 2 September 1837. His code was an important advance over Wheatstone's signaling method. The first transatlantic telegraph cable was successfully completed on 27 July 1866, allowing transatlantic telecommunication for the first time.[5]

The conventional telephone was invented independently by Alexander Bell and Elisha Gray in 1876.[6] Antonio Meucci invented the first device that allowed the electrical transmission of voice over a line in 1849. However Meucci's device was of little practical value because it relied upon the electrophonic effect and thus required users to place the receiver in their mouth to “hear” what was being said.[7] The first commercial telephone services were set up in 1878 and 1879 on both sides of the Atlantic in the cities of New Haven and London.[8][9]

Radio and television

In 1832, James Lindsay gave a classroom demonstration of wireless telegraphy to his students. By 1854, he was able to demonstrate a transmission across the Firth of Tay from Dundee, Scotland to Woodhaven, a distance of two miles (3 km), using water as the transmission medium.[10] In December 1901, Guglielmo Marconi established wireless communication between St. John's, Newfoundland (Canada) and Poldhu, Cornwall (England), earning him the 1909 Nobel Prize in physics (which he shared with Karl Braun).[11] However small-scale radio communication had already been demonstrated in 1893 by Nikola Tesla in a presentation to the National Electric Light Association.[12]

On 25 March 1925, John Logie Baird was able to demonstrate the transmission of moving pictures at the London department store Selfridges. Baird's device relied upon the Nipkow disk and thus became known as the mechanical television. It formed the basis of experimental broadcasts done by the British Broadcasting Corporation beginning 30 September 1929.[13] However, for most of the twentieth century televisions depended upon the cathode ray tube invented by Karl Braun. The first version of such a television to show promise was produced by Philo Farnsworth and demonstrated to his family on 7 September 1927.[14]

Computer networks and the Internet

On 11 September 1940, George Stibitz was able to transmit problems using teletype to his Complex Number Calculator in New York and receive the computed results back at Dartmouth College in New Hampshire.[15] This configuration of a centralized computer or mainframe with remote dumb terminals remained popular throughout the 1950s. However, it was not until the 1960s that researchers started to investigate packet switching — a technology that would allow chunks of data to be sent to different computers without first passing through a centralized mainframe. A four-node network emerged on 5 December 1969; this network would become ARPANET, which by 1981 would consist of 213 nodes.[16]

ARPANET's development centred around the Request for Comment process and on 7 April 1969, RFC 1 was published. This process is important because ARPANET would eventually merge with other networks to form the Internet and many of the protocols the Internet relies upon today were specified through the Request for Comment process. In September 1981, RFC 791 introduced the Internet Protocol v4 (IPv4) and RFC 793 introduced the Transmission Control Protocol (TCP) — thus creating the TCP/IP protocol that much of the Internet relies upon today.

However, not all important developments were made through the Request for Comment process. Two popular link protocols for local area networks (LANs) also appeared in the 1970s. A patent for the token ring protocol was filed by Olof Soderblom on 29 October 1974 and a paper on the Ethernet protocol was published by Robert Metcalfe and David Boggs in the July 1976 issue of *Communications of the ACM*.[17][18]

Basic elements

A basic telecommunication system consists of three elements:

- a transmitter that takes information and converts it to a signal;
- a transmission medium that carries the signal; and,
- a receiver that receives the signal and converts it back into usable information.

For example, in a radio broadcast the broadcast tower is the transmitter, free space is the transmission medium and the radio is the receiver. Often telecommunication systems are two-way with a single device acting as both a transmitter and receiver or *transceiver*. For example, a mobile phone is a transceiver.

Telecommunication over a telephone line is called point-to-point communication because it is between one transmitter and one receiver. Telecommunication through radio broadcasts is called broadcast communication because it is between one powerful transmitter and numerous receivers.

Analogue or digital

Signals can be either analogue or digital. In an analogue signal, the signal is varied continuously with respect to the information. In a digital signal, the information is encoded as a set of discrete values (for example ones and zeros). During transmission the information contained in analogue signals will be degraded by

noise. Conversely, unless the noise exceeds a certain threshold, the information contained in digital signals will remain intact. Noise resistance represents a key advantage of digital signals over analogue signals.

Networks

A network is a collection of transmitters, receivers and transceivers that communicate with each other. Digital networks consist of one or more routers that work together to transmit information to the correct user. An analogue network consists of one or more switches that establish a connection between two or more users. For both types of network, repeaters may be necessary to amplify or recreate the signal when it is being transmitted over long distances. This is to combat attenuation that can render the signal indistinguishable from noise.[23]

Channels

A channel is a division in a transmission medium so that it can be used to send multiple streams of information. For example, a radio station may broadcast at 96.1 MHz while another radio station may broadcast at 94.5 MHz. In this case, the medium has been divided by frequency and each channel has received a separate frequency to broadcast on. Alternatively, one could allocate each channel a recurring segment of time over which to broadcast—this is known as time-division multiplexing and is sometimes used in digital communication.

Modulation

The shaping of a signal to convey information is known as modulation. Modulation can be used to represent a digital message as an analogue waveform. This is known as keying and several keying techniques exist (these include phase-shift keying, frequency-shift keying and amplitude-shift keying). Bluetooth, for example, uses phase-shift keying to exchange information between devices.

Modulation can also be used to transmit the information of analogue signals at higher frequencies. This is helpful because low-frequency analogue signals cannot be effectively transmitted over free space. Hence the information from a low-frequency analogue signal must be superimposed on a higher-frequency signal (known as the carrier wave) before transmission. There are several different modulation schemes available to achieve this (two of the most basic being amplitude modulation and frequency modulation). An example of this process is a DJ's voice being superimposed on a 96 MHz carrier wave using frequency modulation (the voice would then be received on a radio as the channel “96 FM”).[26]

Society and telecommunication

Telecommunication has a significant social, cultural and economic impact on modern society. In 2006, estimates placed the telecommunication industry's revenue at $1.2 trillion (USD) or just under 3% of the gross world product (official exchange rate).[27]

Economic impact

Microeconomics

On the microeconomic scale, companies have used telecommunication to help build global empires. This is self-evident in the case of online retailer Amazon.com but, according to academic Edward Lenert, even the conventional retailer Wal-Mart has benefited from better telecommunication infrastructure compared to its competitors. In cities throughout the world, home owners use their telephones to organize many home services ranging from pizza deliveries to electricians. Even relatively poor communities have been noted to use telecommunication to their advantage. In Bangladesh's Narshingdi district, isolated villagers use cell phones to speak directly to wholesalers and arrange a better price for their goods. In Cote d'Ivoire, coffee growers share mobile phones to follow hourly variations in coffee prices and sell at the best price.

Macroeconomics

On the macroeconomic scale, Lars-Hendrik Röller and Leonard Waverman suggested a causal link between good telecommunication infrastructure and economic growth Few dispute the existence of a correlation although some argue it is wrong to view the relationship as causal.[31]

Because of the economic benefits of good telecommunication infrastructure, there is increasing worry about the inequitable access to telecommunication services amongst various countries of the world—this is known as the digital divide. A 2003 survey by the International Telecommunication Union (ITU) revealed that roughly one-third of countries have less than 1 mobile subscription for every 20 people and one-third of countries have less than 1 fixed line subscription for every 20 people. In terms of Internet access, roughly half of all countries have less than 1 in 20 people with Internet access. From this information, as well as educational data, the ITU was able to compile an index that measures the overall ability of citizens to access and use information and communication technologies. Using this measure, Sweden, Denmark and Iceland received the highest ranking while the African countries Niger, Burkina Faso and Mali received the lowest.

Social impact

Telecommunication is playing an increasingly important role in social relationships. In recent years, the popularity of social networking sites has increased dramatically. These sites allow users to communicate with each other as well as post photographs, events and profiles for others to see. The profiles can list a person's age, interests, sexuality and relationship status. In this way, these sites can play important role in everything from organising social engagements to courtship.[34]

Prior to social networking sites, technologies like SMS and the telephone also had a significant impact on social interactions. In 2000, market research group Ipsos MORI reported that 81% of 15 to 24 year-old SMS users in the United Kingdom had used the service to coordinate social arrangements and 42% to flirt.

Other impacts

In cultural terms, telecommunication has increased the public's ability to access to music and film. With television, people can watch films they have not seen before in their own home without having to travel to the video store or cinema. With radio and the Internet, people can listen to music they have not heard before without having to travel to the music store.

Telecommunication has also transformed the way people receive their news. A survey by the non-profit Pew Internet and American Life Project found that when just over 3,000 people living in the United States were asked where they got their news "yesterday", more people said television or radio than newspapers. The results are summarised in the following table (the percentages add up to more than 100% because people were able to specify more than one source).[36]

Telecommunication has had an equally significant impact on advertising. TNS Media Intelligence reported that in 2007, 58% of advertising expenditure in the United States was spent on mediums that **depend upon teleco Global Justice Movement**

Democratic mundialization

Mundialization is the name of one of the movements aiming at **democratic globalization**.

Democratic globalization is the concept of an institutional system of global democracy that would give world citizens a say in world organizations. This would, in the view of its proponents, bypass nation-states, corporate entities, NGOs, etc.

Purpose

Proponents state that democratic globalization's purpose is to:

- expand mundialization in a different way to economic globalization and "make people closer, more united and protected" though what this means in practice is only vaguely defined.
- have it reach all fields of activity and knowledge, not only the economic one, even if that one is crucial to develop the well-being of world citizens. This implies some intervention not only in the economic and political life of the individual but also in their access to culture and education.
- give world citizens a democratic access (e.g., presidential voting for United Nations Secretary-General by citizens and direct election of members of a United Nations Parliamentary Assembly) and a say to those global activities.

Global democracy

Mundialization also includes asking about Global Democracy, this is, global votings to elect the world leaders (specially, presidential elections for UN General Secretary)

and more democracy in international organizations (i.e. United Nations Parliament). Thus, it supports the International Campaign for the Establishment of a United Nations Parliamentary Assembly, that would allow for participation of member nations' legislators and, eventually, direct election of United Nations (UN) parliament members by citizens worldwide.

Difference to anti-globalization

Supporters of the democratic globalization movement draw a distinction between their movement and the one most popularly known as the 'anti-globalization' movement, claiming that their movement avoids ideological agenda about economics and social matters although, in practice, it is often difficult to distinguish between the two camps. Democratic globalization supporters state that the choice of political orientations should be left to the world citizens, via their participation in world democratic institutions and direct vote for world presidents (see presidentialism).

Some supporters of the "anti-globalization movement" do not necessarily disagree with this position. For example, George Monbiot, normally associated with the anti-globalization movement (who prefers the term Global Justice Movement) in his work *Age of Consent* has proposed similar democratic reforms of most major global institutions, suggesting direct democratic elections of such bodies by citizens, and suggests a form of "federal world government."

Procedure

Democratic globalization, proponents claim, would be reached by creating democratic global institutions and changing international organizations (which are currently intergovernmental institutions controlled by the nation-states), into global ones controlled by voting by the citizens. The movement suggests to do it gradually by building a limited number of democratic global institutions in charge of a few crucial fields of common interest. Its long term goal is that these institutions federate later into a full-fledged democratic world government.

And they propose the creation of world services for citizens, like world civil protection and prevention (from natural hazards) services.

Proponents

One of its most prolific proponents is the British political thinker David Held. In the last decade he published a dozen books regarding the spread of democracy from territorially defined nation states to a system of global governance that encapsulates the entire universe.

Jim Stark has initiated a process for a Democratic World Government through a Global Referendum. As of July 10, 2008, 9,305 individuals have voted in favor the initiative (93.28% of the total votes) through an online ballot at voteworldgovernment.org.

Alter-globalization

Alter-globalization (also known as alternative globalization, Alter-mundialization - from the French "altermondialisme"- or the global justice movement) is the name of a social movement that supports global cooperation and interaction, but which opposes the negative effects of economic globalization, feeling that it often works to the detriment of, or does not adequately promote, human values such as environmental and climate protection, economic justice, labor protection, protection of indigenous cultures and human rights. The name may have been derived from a popular slogan of the movement: 'Another world is possible', which came out of the World Social Forum.[1] "The alter-globalization movement is a cooperative movement designed to protest the direction and perceived negative economic, political, social, cultural and ecological consequences of neoliberal globalization" (Krishna-Hensel 202) [2]. Many alter-globalists, unlike anti-globalists, seek to avoid the "disestablishment of local economies and disastrous humanitarian consequences" ([1]). Most members of this movement shun the label "anti-globalization" as pejorative and incorrect since they actively support human activity on a global scale and do not oppose economic globalization *per se*. Instead they see their movement as an alternative to what they term neo-liberal globalization in which international institutions (WTO, World Bank, IMF etc.) and major corporations devote themselves to enriching the developed world while giving little or no attention to the detrimental effects of their actions on the people and environments of less developed countries, countries whose governments are often too weak or too corrupt to resist or regulate them. This is not to be confused with proletarian internationalism as put forth by communists in that alter-globalists do not necessarily oppose the free market, but the disregard for human values that sometimes comes with it.

Etymology

The term was coined against accusations of nationalism by neoliberal proponents of globalization, meaning a support of both humanism and universal values but a rejection of the Washington consensus and similar neoliberal policies. The "alter-globalization" French movement was thus opposed to the "Treaty establishing a Constitution for Europe" on the grounds that it only advanced neoliberalism and an Anglo-Saxon economic model.

Originally developed in French as *altermondialisme*, it has been borrowed into English in the form of **altermondialism** or **altermondialization**. It defines the stance of movements opposed to a neoliberal globalization, but favorable to a globalization respectful of human rights, the environment, national sovereignty, and cultural diversity.

Following the French usage of the word *altermondialist*, the English counterpart *alter-globalist* may have been coined.

The term *alter-globalization* is derived from the term *anti-globalization*, which journalists and others have used to describe the movement. Many French journalists, in particular, have since ceased using the term *anti-globalization* in favor of *alter-globalization*. It is supposed to distinguish proponents of alter-globalization from different "anti-globalization" activists (those who are against *any* kind of globalization: nationalists, protectionists, communitarians, etc.).

History

Economic integration via trade, financial flows, and investments had been occurring for many years, but the “Battle of Seattle” in 1999 (otherwise known as World Trade Organization Ministerial Conference of 1999 protest activity), brought significant attention to the outcry for such integration through vast media outlets, support groups and activists. Though this opposition first became highly popularized in 1999, it can be traced back prior to the 1980s when the Washington Consensus became a dominant development in thinking and policy-making (Broad and Heckscher, 713) [3].

Factors historically provoking economic integration and resistance

- The period of European colonialism
- The early post World War II period
- The 1970s, when Southern governments banded together to pose alternative rules and institutions and when popular resistance to different aspects of economic integration spread in many nations [3]

The period of European colonialism

During the late 15th century most regions of the world were self-sufficient; although this led to much starvation and famine. As nations grew in power, sought to expand, and increased their wealth they forged on a mission to gain new lands. The central driving force of these nations was colonialism. Once in power in these new territories, colonists began to change the face of the economy in the area which provided them with motivation to sustain their efforts. Since they no longer had to solely rely on their own lands to produce goods, nations such as Europe began global commerce after establishing colonies in countries like Africa, Asia, the Pacific and the Middle East, Latin America and the Caribbean.

Once lands were conquered the native inhabitants or others brought along as slaves grew rebellious towards their captors. This is evident in a number of slave rebellions, such as Harper's Ferry, Stono, and the New York Burning, and Native American attacks on European colonists on the North American continent. Over time these skirmishes gave way to social movements aimed at eliminating international trade in goods and labor, an example of which is the attempt to abolish the slave trade and the establishment of the First International Workingmen's Association (IWA). [3]

The post War World II era

The global economic state of post World War II called for the creation of the International Monetary Fund (IMF), the World Bank (the International Bank for Reconstruction and Development) and the General Agreement on Tariffs and Trade (GATT). The International Monetary Fund's purpose was to supervise the exchange rate system whereas the World Bank's goals were aimed at creating long term/low interest loans that aided in the 'reconstruction' of Europe and the 'development' of independent Third World countries. GATT originated from a perceived need to "oversee the reduction of tariff barriers to trade in manufactured goods".[3]

These financial institutions allowed for the development of global private corporations as administration over trade fell. Free market systems began to grow in popularity as developing countries were required to globalize their economies instead of concentrating on creating jobs and stimulating economic growth. This allowed for private corporations to expand globally, without regard to central issues facing the home country like the environment, social structure or culture.[3]

The 1970s and Southern resistance

The 1970s saw resistance to global expansion by both government and non-government parties. Senator Frank Church was concerned with the role multinational corporations were beginning to play and created a subcommittee that reviewed corporate practices to see if they were advancing American interests or not (i.e. exporting jobs that could be kept within the United States). It was through these public revelations that Southern nations around the world wanted rules to govern the global economy. More specifically, these Southern nations (ranging from Tanzania to the Philippines) wanted to raise/ stabilize raw material prices, and to increase Southern exports.[3] These nations began their movement not only with central goals but with codes of conduct as well (though non-enforceable). Thus two manifestations, one individual, and the other collective, amongst Southern nation-states, existed in their attempts to generate reform.

Preconditions for Alter-Globalization

It is suggested by some scholars, such as Iagin Russia, that the effects and growth of alter-globalization can be felt worldwide due to progress made as a result of the Internet. The Internet provides easy, free-flowing and mobile information/network organization that is in its very nature democratic; knowledge is for everyone and is perceived to be needed for further development of our modern world. Furthermore, Internet access creates the fast and easy spread of, and communication of, an organization's principles, progress, growth, opposition and development. Therefore in order to allot for the distribution of alter-globalization, the Internet has provided a means of communication that stretches beyond the limits of distance, time and space so new ideas may not only be generated but implemented as well.[4]

Alter-Globalization as a Social Movement

Alter-globalization can be characterized as a social movement based on Charles Tilly's WUNC displays. WUNC is an acronym for W-Worthiness, U-Unity, N-Numbers and C-Commitment. Alter-globalization is seen as a worthy cause because its goals

aim to sustain those being afflicted by the selfish acts of global corporations and their negative effect on human value, the environment, and social justices. It also serves to unite various people around the world for a good cause: to fight for better treatment of Third World countries and their economies, workers rights, fair/equal human rights. Many are committed to the goals set forth by alter-globalization groups because of the perceived negative effects globalization is creating around the world. Examples include: the exploitation of labor, outsourcing of jobs to foreign nations (though some argue this is a nationalistic rather than alter-globalist motive), pollution of local environments, and harm to foreign cultures to which jobs are outsourced.

Furthermore, alter-globalization can be viewed as being purposeful and creating solidarity; two of the three incentives posited by the rational choice theory proposed by Dennis Chong. Rational choice theory focuses on the incentives of activism, advocating that activism follows when the benefits to protesting outweigh the costs. Alter-globalization allows one the opportunity to see the difference they are working towards by eliminating the negative side effects already affecting our world (i.e. environmental pollution). It also calls for solidarity amongst peer/community relations that can only be experienced by being a part of the system that causes change.

Another type of social movement that applies to alter-globalization and our understanding of how it relates is found in collective action frames. Collective action frames provide a schemata of interpretation that allows for organization of experience into guided action. Action frames are perceived as powerful because they draw from people's emotions, re-enforce the collective identity of the group, and create a statement from the groups' collective beliefs. Frame analysis is helpful to alter-globalization because it calls for activists to learn through their socialization and interactions with others. One of the key tasks of action frames is generating agency, or a plausible story that indicates the ability of the activists to create change. With alter-globalization every aspect of the movement suggests this ability because the goals affect the economies, environments and human relations of various countries around the world.

Examples of Alter-Globalization as a Movement

1. Attempts at an alter-globalization movement to reform policies and processes of the WTO include: "alternative principles of public accountability, the rights of people and the protection of the environment" through the theoretical framework of Robert Cox. [5]

2. 'Fair trade' initiatives, corporate codes of conduct, and social clauses as well as a return to local markets instead of relying too heavily on global markets. [6]

3. "Alter-globalization activists have promoted alternative water governance models through North-South red-green alliances between organized labor, environmental groups, women's groups, and indigenous groups..." (spoken in response to the increase in privatization of the global water supply) {[7]

4. "The first current of the alter-globalization movement) considers that instead of getting involved in a global movement and international forums, the path to social change lies through giving life to horizontal, participatory, convivial and sustainable values in daily practices, personal life and local spaces. Many urban activists cite the way that, for example, the Zapatistas in Mexico and other Latin American indigenous movements now focus on developing communities' local autonomy via participatory self-government, autonomous education systems and improving the quality of life. They appreciate too, the convivial aspect of local initiatives and their promise of small but real alternatives to corporate globalization and mass consumption."

Groups

Advocates of alter-globalization have set up an online global news network, the Independent Media Center, to report on developments pertinent to the movement. Groups in favor of alter-globalization include ATTAC, an international trade reform network headquartered in France.

World Social Forum

The largest forum for alter-globalization activity is the annual World Social Forum. The World Social Forum is intended as a democratic space organized in terms of the movement's values.

Globalization and Health is an open-access, peer-reviewed, online journal that provides an international forum for high quality original research, knowledge sharing and debate on the topic of globalization and its effects on health, both positive and negative. Globalization, namely the intensification of flows of people, goods, and services across borders, has a complex influence on health. The journal publishes material relevant to any aspect of globalization and health from a wide range of social and medical science disciplines (e.g. economics, sociology, epidemiology, demography, psychology, politics and international relations). The output of the journal is useful to a wide audience, including academics, policy-makers, health care practitioners, and public health professionals.The journal is affiliated with the London School of Economics.

Globalization and Health's articles are archived in PubMed Central, the US National Library of Medicine's full-text repository of life science literature, and also in repositories at the University of Potsdam in Germany, at INIST in France and in e-Depot, the National Library of the Netherlands' digital archive of all electronic publications. The journal is also participating in the British Library's e-journals pilot project, and plans to deposit copies of all articles with the British Library.

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Globalization and Health considers the following types of articles:

Research - dissemination of high quality original research.

Reviews - comprehensive, authoritative critical reviews of any subject within the scope of the journal.

Commentaries - short, focussed and opinionated articles on any subject within the journal's scope. These articles are usually related to a contemporary issue, such as recent research findings, and are often written by opinion leaders invited by the Editorial Board.

Debate articles - present an argument that is not essentially based on practical research. Debate articles can report on all aspects of the subject including sociological and ethical aspects.

Short reports - brief reports of data from original research.

Book reviews - short summaries of the strengths and weaknesses of a book. They should evaluate its overall usefulness to the intended audience.

Sovereignty

is the quality of having supreme, independent authority over a territory. It can be found in a power to rule and make law that rests on a political fact for which no purely legal explanation can be provided. The concept has been discussed, debated and questioned throughout history, from the time of the Romans through to the present day, although it has changed in its definition, concept, and application throughout, especially during the Age of Enlightenment. The current notion of state sovereignty were laid down in the Treaty of Westphalia (1648), which, in relation to states, codified the basic principles of territorial integrity, border inviolability, and supremacy of the state (rather than the Church). A **sovereign** is a supreme lawmaking authority.

History

Classical

Ideas about sovereignty have changed over time. The Roman jurist Ulpian observed that:

- The *!!* of the people is transferred to the Emperor,
- The Emperor is not bound by the law,
- The Emperor's word is law.

Ulpian was expressing — although he did not use the term — the idea that the Emperor exercised a rather absolute form of sovereignty. Ulpian's statements were known in medieval Europe but sovereignty was not an important concept in medieval times. Medieval monarchs were *not* sovereign, at least not strongly so, because they were constrained by, and shared power with, their feudal aristocracy. Furthermore, both were strongly constrained by custom.

Medieval

Sovereignty existed during the Medieval Period as the de jure rights of nobility and royalty, and in the de facto right and capability of an individual to make their own choices in life.

Around c. 1380-1400, the issue of feminine sovereignty was addressed in Geoffrey Chaucer's Middle English collection of *Canterbury Tales*, specifically in *The Wife of Bath's Tale*.[1]

A later English Arthurian romance, *The Wedding of Sir Gawain and Dame Ragnell* (c. 1450)[2], uses much of the same elements of the Wife of Bath's tale, yet changes the setting to the court of King Arthur and the Knights of the Round Table. The story revolves around the knight Sir Gawain granting to Dame Ragnell, his new bride, what is purported to be wanted most by women: sovereignty.

We desire most from men,
From men both rich and poor,
To have sovereignty without lies.
For where we have sovereignty, all is ours,
Though a knight be ever so fierce,
And ever win mastery.
It is our desire to have master
Over such a sir.
Such is our purpose.

—The Wedding of Sir Gawain and Dame Ragnell (c. 1450), [2]

Reformation

Sovereignty reemerged as a concept in the late 1500s, a time when civil wars had created a craving for stronger central authority, when monarchs had begun to gather power into their own hands at the expense of the nobility, and the modern nation state was emerging. Jean Bodin, partly in reaction to the chaos of the French wars of religion; and Thomas Hobbes, partly in reaction to the English Civil War, both presented theories of sovereignty calling for strong central authority in the form of absolute monarchy. In his 1576 treatise *Six livres de la république* ("Six Books of the Republic") Bodin argued that it is inherent in the nature of the state that sovereignty must be:

- Absolute: On this point he said that the sovereign must not be hedged in with obligations and conditions, must be able to legislate without his (or its) subjects' consent, must not be bound by the laws of his predecessors, and could not, because it is illogical, be bound by his own laws.
- Perpetual: Not temporarily delegated as to a strong leader in an emergency or to a state employee such as a magistrate. He held that sovereignty must be perpetual because anyone with the power to enforce a time limit on the governing power must be above the governing power: impossible if the governing power is absolute.

Bodin rejected the notion of transference of sovereignty from people to sovereign ; natural law and divine law confer upon the sovereign the right to rule. And the sovereign is not above divine law or natural law. He is above (*ie.* not bound by) only positive law, that is, laws made by humans. The fact that the sovereign must obey divine and natural law imposes ethical constraints on him. Bodin also held that the *lois royales*, the fundamental laws of the French monarchy which regulated matters such as succession, are natural laws and are binding on the French sovereign. How divine and natural law could in practice be enforced on the sovereign is a problematic feature of Bodin's philosophy: any person capable of enforcing them on him would be above him.

Despite his commitment to absolutism, Bodin held some moderate opinions on how government should in practice be carried out. He held that although the sovereign is not obliged to, it is advisable for him, as a practical expedient, to convene a senate from whom he can obtain advice, to delegate some power to magistrates for the practical administration of the law, and to use the Estates as a means of communicating with the people.

With his doctrine that sovereignty is conferred by divine law, Bodin predefined the scope of the divine right of kings.

Age of Enlightenment

Hobbes, in *Leviathan* (1651) introduced an early version of the social contract (or contractarian) theory, arguing that to overcome the "nasty, brutish and short" quality of life without the cooperation of other human beings, people must join in a "commonwealth" and submit to a "Soveraigne [*sic*] Power" that is able to compel them to act in the common good. This expediency argument attracted many of the early proponents of sovereignty. Hobbes deduced from the definition of sovereignty that it must be:

- Absolute: because conditions could only be imposed on a sovereign if there were some outside arbitrator to determine when he had violated them, in which case the sovereign would not be the final authority.

- Indivisible: The sovereign is the only final authority in his territory; he does not share final authority with any other entity. Hobbes held this to be true because otherwise there would be no way of resolving a disagreement between the multiple authorities.

Hobbes' hypothesis that the ruler's sovereignty is contracted to him by the people in return for his maintaining their safety, led him to conclude that if the ruler fails to do this, the people are released from their obligation to obey him.

Bodin's and Hobbes's theories would decisively shape the concept of sovereignty, which we can find again in the social contract theories, for example, in Rousseau's (1712-1778) definition of popular sovereignty (with early antecedents in Francisco Suárez's theory of the origin of power), which only differs in that he considers the people to be the legitimate sovereign. Likewise, it is inalienable – Rousseau

condemned the distinction between the origin and the exercise of sovereignty, a distinction upon which constitutional monarchy or representative democracy are founded. Niccolò Machiavelli, Thomas Hobbes, John Locke, and Montesquieu are also key figures in the unfolding of the concept of sovereignty.

The second book of Jean-Jacques Rousseau's *Du Contrat Social, ou Principes du droit politique* (1762) deals with sovereignty and its rights. Sovereignty, or the general will, is inalienable, for the will cannot be transmitted; it is indivisible, since it is essentially general; it is infallible and always right, determined and limited in its power by the common interest; it acts through laws. Law is the decision of the general will in regard to some object of common interest, but though the general will is always right and desires only good, its judgment is not always enlightened, and consequently does not always see wherein the common good lies; hence the necessity of the legislator. But the legislator has, of himself, no authority; he is only a guide who drafts and proposes laws, but the people alone (that is, the sovereign or general will) has authority to make and impose them.

Rousseau, in his 1763 treatise *Of the Social Contract*[3] argued, "the growth of the State giving the trustees of public authority more and means to abuse their power, the more the Government has to have force to contain the people, the more force the Sovereign should have in turn in order to contain the Government," with the understanding that the Sovereign is "a collective being of wonder" (Book II, Chapter I) resulting from "the general will" of the people, and that "what any man, whoever he may be, orders on his own, is not a law" (Book II, Chapter VI) – and furthermore predicated on the assumption that the people have an unbiased means by which to ascertain the general will. Thus the legal maxim, "there is no law without a sovereign."

The 1789 French Revolution shifted the possession of sovereignty from the sovereign ruler to the nation and its people.

Carl Schmitt (1888-1985) defined sovereignty as "the power to decide the state of exception", in an attempt, argues Giorgio Agamben, to counter Walter Benjamin's theory of violence as radically disjoint from law. Georges Bataille's heterodox conception of sovereignty, which may be said to be an "anti-sovereignty", also inspired many thinkers, such as Jacques Derrida, Agamben or Jean-Luc Nancy.

— Lassa Oppenheim[4], an authority on international law

Absoluteness

An important factor of sovereignty is its degree of **absoluteness**. A sovereign power has absolute sovereignty if it has the unlimited right to control everything and every kind of activity in its territory. This means that it is not restricted by a constitution, by the laws of its predecessors, or by custom, and no areas of law or behavior are reserved as being outside its control. For example, parents are not guaranteed the right to decide some matters in the upbringing of their children independently of the sovereign power, municipalities are not guaranteed freedom from its interference in some local matters, etc. Theorists have diverged over the necessity or desirability of

absoluteness. Historically, it is doubtful whether a sovereign power has ever claimed complete absoluteness, let alone had the power to actually enforce it.[*citation needed*]

Exclusivity

The key element of sovereignty in the legalistic sense is that of **exclusivity** of jurisdiction. Specifically, when a decision is made by a sovereign entity, it cannot generally be overruled by a higher authority, usually another state.

De jure and de facto

De jure, or **legal**, sovereignty is the theoretical right to exercise exclusive control over one's subjects.

De facto, or **actual**, sovereignty is concerned with whether control in fact exists. It can be approached in two ways:

1. Does the governing power have sufficient strength (police, etc.) to compel its subjects to obey it? (If so, a type of *de facto* sovereignty called *coercive* sovereignty exists.)
2. Are the subjects of the governing power in the habit of obeying it?

It is generally held that sovereignty requires not only the legal right to exercise power, but the actual exercise of such power. That is, "No *de jure* sovereignty without *de facto* sovereignty." In other words, neither claiming/being proclaimed Sovereign, *nor* merely exercising the power of a Sovereign is sufficient; sovereignty requires *both* elements.

Internal

Internal sovereignty is the relationship between a sovereign power and its own subjects. A central concern is legitimacy: by what right does a political body (or individual) exercise authority over its subjects? Possible answers include: by the divine right of kings or by social contract (popular sovereignty).

External sovereignty concerns the relationship between a sovereign power and other states. The United Kingdom uses the following criteria when deciding under what conditions other states recognise a political entity as having sovereignty over some territory, as an example of typical criteria used by state when deciding this:

External sovereignty is connected with questions of international law, such as: when, if ever, is intervention by one country onto another's territory permissible?

Following the Thirty Years' War, a European religious conflict that embroiled much of the continent, the Peace of Westphalia in 1648 established the notion of territorial sovereignty as a doctrine of noninterference in the affairs of other nations, so-called Westphalian sovereignty. This resulted as a natural extension of the principle of *cuius regio, eius religio* (Whose realm, his religion), leaving the Roman Catholic

Church with little ability to interfere with the internal affairs of many European states.

In international law, sovereignty means that a government possesses full control over its own affairs within a territorial or geographical area or limit. Determining whether a specific entity is sovereign is not an exact science, but often a matter of diplomatic dispute. There is usually an expectation that *de jure* and *de facto* sovereignty exist at the place and time of concern, and rest in the same organization. Foreign governments *recognize* the sovereignty of a state over a territory, or refuse to do so.

For instance, in theory, both the People's Republic of China and the Republic of China considered themselves sovereign governments over the whole territory of mainland China and Taiwan. Though some foreign governments recognize the Republic of China as the valid state, most now recognize the People's Republic of China. However, de facto, the People's Republic of China has jurisdiction only over mainland China but not Taiwan, while the Republic of China has jurisdiction only over Taiwan and some outlying islands but not mainland China. Since ambassadors are only exchanged between sovereign high parties, the countries recognizing the People's Republic often entertain de facto but not de jure diplomatic relationships with the Republic by maintaining "offices of representation", such as the American Institute in Taiwan, rather than embassies there.

Sovereignty may be recognized even when the sovereign body possesses no territory or its territory is under partial or total occupation by another power. The Holy See was in this position between the annexation in 1870 of the Papal States by Italy and the signing of the Lateran Treaties in 1929, when it was recognised as sovereign by many (mostly Roman Catholic) states despite possessing no territory – a situation resolved when the Lateran Treaties granted the Holy See sovereignty over the Vatican City. Another case, *sui generis*, though often contested, is the Sovereign Military Order of Malta, the third sovereign mini-state based in an enclave in the Italian capital (since in 1869 the Palazzo di Malta and the Villa Malta receive extraterritorial rights, in this way becoming the only "sovereign" territorial possessions of the modern Order), which is the last existing heir to one of several once militarily significant, crusader states of sovereign military orders. In 1607 its Grand masters were also made Reichsfürst (princes of the Holy Roman Empire) by the Holy Roman Emperor, granting them seats in the Reichstag, at the time the closest permanent equivalent to a UN-type general assembly; confirmed 1620). These sovereign rights never deposed, only the territories were lost. 100 modern states still maintain full diplomatic relations with the order[5] (now *de facto* "the most prestigious service club"), and the UN awarded it observer status. Another case is also the International Committee of the Red Cross.

Similarly, the governments-in-exile of many European states (for instance, Norway, Netherlands or Czechoslovakia) during the Second World War were regarded as sovereign despite their territories being under foreign occupation; their governance resumed as soon as the occupation had ended. The government of Kuwait was in a similar situation *vis-à-vis* the Iraqi occupation of its country during 1990-1991.

Shared

Just like the office of Head of state (whether sovereignty is vested in it or not) can be vested jointly in several persons within a state, the sovereign jurisdiction over a single political territory can be shared jointly by two or more consenting powers, notably in the forms of a condominium or of (as still in Andorra) a co-principality.

Tribal

Tribal sovereignty

Nation-states

Nations, claiming the right of self-determination, often establish sovereign states for themselves, thus creating nation-states. An aspiring nation-state must have sovereignty recognised by other nation-states in order to become one.

Federations

In federal systems of government, *sovereignty* also refers to powers which a state government possesses independently of the national government. Whether state sovereignty is superior to the sovereignty of the national government or vice versa determines whether the country is considered a federation (such as the United States) or a confederation (such as the Iroquois Confederacy). The fact that both state and national governments can simultaneously be sovereign is often explained by reasoning that sovereignty ultimately flows from the people in both cases. Controversy over states' rights ultimately contributed to the start of the American Civil War.

Acquisition

A number of methods of acquisition of sovereignty are presently or have historically been recognised by international law as lawful methods by which a state may **acquire sovereignty over territory.**

Justifications

There exist vastly differing views on the moral basis of sovereignty. A fundamental polarity is between theories that assert that sovereignty is vested directly in the sovereign by divine right or natural right, and theories that assert it is vested in the people. In the latter case there is a further division into those that assert that the people transfer their sovereignty to the sovereign (Hobbes), and those that assert that the people retain their sovereignty (Rousseau).

- Democracy is based on the concept of *popular sovereignty*. Representative democracies permit (against Rousseau's thought) a transfer of the exercise of sovereignty from the people to the parliament or the government. Parliamentary sovereignty refers to a representative democracy where the

Parliament is, ultimately, the source of sovereignty, and not the executive power.
- The republican form of government acknowledges that the sovereign power is founded in the people, individually, not in the collective or whole body of free citizens, as in a democratic form. Thus no majority can deprive a minority of their sovereign rights and powers.
- Absolute monarchies are typically based on belief in the divine right of kings.

Views on

- Realists view sovereignty as being untouchable and as guaranteed to legitimate nation-states.
- Rationalists see sovereignty similarly to Realists. However, Rationalism states that the sovereignty of a nation-state may be violated in extreme circumstances, such as human rights abuses.
- Internationalists believe that sovereignty is outdated and an unnecessary obstacle to achieving peace, in line with their belief of a 'global community'. Supporting this is their belief that the concept of nation-states, based on the Treaty of Westphalia, is also outdated and should be abolished.
- Anarchists and some libertarians deny the sovereignty of states and governments. Anarchists often argue for a specific individual kind of sovereignty, such as the Anarch as a sovereign individual. Salvador Dalí, for instance, talked of "anarcho-monarchist" (as usual for him, tongue in cheek); Antonin Artaud of *Heliogabalus: Or, The Crowned Anarchist*; Max Stirner of *The Ego and Its Own*; Georges Bataille and Jacques Derrida of a kind of "antisovereignty". Therefore, anarchists join a classical conception of the individual as sovereign of himself, which forms the basis of political consciousness. The unified consciousness is sovereignty over one's own body, as Nietzsche demonstrated (see also Pierre Klossowski's book on *Nietzsche and the Vicious Circle*). *See also self-ownership and Sovereignty of the individual*.
- Imperialists hold a view of sovereignty where power rightfully exists with those states that hold the greatest ability to impose the will of said state, by force or threat of force, over the populace or other states with weaker military or political will. They effectively deny the sovereignty of the individual in deference to either the 'good' of the whole, or to divine right.

Relation to rule of law

Another topic is whether the law is held to be sovereign, that is, whether it is above political or other interference. Sovereign law constitutes a true state of law, meaning the letter of the law (if constitutionally correct) is applicable and enforceable, even when against the political will of the nation, as long as not formally changed following the constitutional procedure. Strictly speaking, any deviation from this principle constitutes a revolution or a coup d'état, regardless of the intentions.] Sovereign as a title

In some cases, the title sovereign is not just a generic term, but an actual (part of the) formal style of a Head of state.

Thus from 22 June 1934, to 29 May 1953, (the title "Emperor of India" was dropped as of 15 August 1947, by retroactive proclamation dated 22 June 1948), the King of South Africa was styled in the Dominion of South Africa: "By the Grace of God, of Great Britain, Ireland and of the British Dominions beyond the Seas King, Defender of the Faith, Emperor of India and *Sovereign* in and over the Union of South Africa." Upon the accession of Elizabeth II to the Throne of South Africa in 1952, the title was changed to Queen of South Africa and Her other Realms and Territories, Head of the Commonwealth, parallel to the style used in almost all the other Commonwealth realms. The pope holds ex officio the title "Sovereign of the Vatican City State" in respect to Vatican City.

The adjective form can also be used in a Monarch's full style, as in pre-imperial Russia, 16 January 1547 – 22 November 1721: *Bozhiyeyu Milostiyu Velikiy/Velikaya* ***Gosudar'/Gosudarynya*** *Tsar'/Tsaritsa i Velikiy/Velikaya Knyaz'/Knyaginya N.N. vseya Rossiy Samodyerzhets* "By the Grace of God Great **Sovereign Tsar**/Tsarina and Grand Prince/Princess, N.N., of All Russia, Autocrat"

Civil defense

Civil defense, **civil defence** (see spelling differences) or **civil protection** is an effort to prepare non combatant's for military attack. It uses the principles of emergency operations: prevention, mitigation, preparation, response, or emergency evacuation, and recovery. Programmes of this sort were initially discussed at least as early as the 1920s but only became widespread after the threat of nuclear weapons was realized.

Since the end of the Cold War, the focus of civil defense has largely shifted from military attack to emergencies and disasters in general. The new concept is described by a number of terms, each of which has its own specific shade of meaning, such as **crisis management**, **emergency management**, **emergency preparedness**, **contingency planning**, **emergency services**, and **civil protection**. In some countries, the all-encompassing nature of civil defense is denoted by the term "total defense" such as the Swedish word *totalförsvar*. The name suggests committing all resources, hence the term total, of the nation to the defense.

Civil Defense literature such as Fallout Protection were common during the cold war era.

In most of the NATO states, such as the United States, the United Kingdom or Germany as well as the [then] Soviet Bloc, and especially in the neutral countries, such as Switzerland and in Sweden during the 1950s and 60s, many civil defense practices took place to prepare for the aftermath of a nuclear war, which seemed quite likely at that time. Such efforts were opposed by the Catholic Worker Movement and by peace activists such as Ralph DiGia , on the grounds that these programs gave the public false confidence that they could survive a nuclear war.[1] There was never strong civil defense policy because it fundamentally violated the doctrine of "mutual assured destruction" (M.A.D.) by making provisions for survivors. Also, a fully fledged total defense would have been too expensive. Above all, compared to the power of destruction a defense would have been ineffective. In the M.A.D. doctrine, there are not supposed to be any survivors for a civil defense

system to assist (thus the acronym). Governments in the West sought to implement civil defense measures against nuclear war in the face of popular apathy and scepticism.

Public Service Announcements including children's songs were created by government institutes and then distributed and released by radio stations to educate the public in case of nuclear attack.[2]

During the Cold War, civil defense was seen largely as defending against and recovering from an attack involving nuclear weapons. After the end of the Cold War, the focus moved from defense against nuclear war to defense against a terrorist attack possibly involving chemical or biological weapons; in the context of the United States this eventually led to the replacement of the United States civil defense with the Federal Emergency Management Agency. After the September 11, 2001 attacks, in the United States the concept of civil defense has been revisited under the umbrella term of homeland security and all-hazards emergency management.

In Europe, the triangle CD logo continues to be widely used. The old US civil defense logo was used in the FEMA logo until recently and is hinted at in the United States Civil Air Patrol logo. Created in 1939 by Charles Coiner of the N. W. Ayer Advertising Agency, it was used throughout World War II and the Cold War era. In 2006, the National Emergency Management Association — a U.S. organization made up of state emergency managers — officially retired the Civil Defense triangle logo, replacing it with a stylized EM (standing for Emergency management).[1]

The term "civil protection" is currently widely used within the European Union to refer to government-approved systems and resources tasked with protecting the non combat population, primarily in the event of natural and technological disasters. In recent years there has been emphasis on preparedness for technological disasters resulting from terrorist attack. Within EU countries the term **crisis management** emphasises the political and security dimension rather than measures to satisfy the immediate needs of the population.

In Australia, civil defense is the responsibility of the volunteer-based State Emergency Service.

Importance

Relatively small investments in preparation can speed up recovery by months or years and thereby prevent millions of deaths by hunger, cold and disease.[*citation needed*] According to human capital theory in economics, a country's population is more valuable than all of the land, factories and other assets that it possesses. People rebuild a country after its destruction, and it is therefore important for the economic security of a country that it protect its people. Also, reducing fear and uncertainty via civil defense helps people's quality of life and has positive economic benefits.[*citation needed*] According to psychology, it is important for people to feel like they are in control of their own destiny, and preparing for uncertainty via civil defense may help to achieve this. If the people are not in control, and the preparations ineffective, the government loses its credibility and the respect of its citizens.

Threat assessment

Threats to civilians and civilian life include nuclear threats, biological threats, chemical threats, and others. Threat assessment involves studying each threat so that preventative measures can be built into civilian life.

Conventional

This would be conventional explosives. Shelter intended to protect against nuclear blast effects would include thick concrete and other sturdy elements which are resistant to conventional explosives.[*citation needed*] A shelter designed to protect only from radiation and fallout, however, would be much more vulnerable to conventional explosives.

Nuclear

The biggest threats from a nuclear attack are effects from the blast, fires and radiation. One of the most prepared countries for a nuclear attack is Switzerland. Almost every building in Switzerland has an *abri* (shelter) against the initial nuclear bomb and explosion followed by the fallout. Because of this, many people use it as a safe to protect valuables, photos, financial information and so on. Switzerland also has air-raid and nuclear raid sirens in every village.

Dirty Bomb

A "radiologically enhanced weapon", or "dirty bomb" uses an explosive to spread radioactive material. This is a theoretical risk, and such weapons have not been used by terrorists. Depending on the quantity of the radioactive material, the dangers may be mainly psychological. Toxic effects can be managed by standard hazmat techniques.

Biological

The threat here is primarily from disease-causing microorganisms such as bacteria and viruses.

Chemical

Various chemical agents are a threat such as nerve gas (VX, Sarin, etc.).

Other

There are many other possible threats besides these, for example the invasion of enemy troops and armed warfare.

] Stages

Mitigation

Mitigation is the process of actively preventing the war or the release of nuclear weapons. It includes policy analysis, diplomacy, political measures, nuclear disarmament and more military responses such as a National Missile Defense and air defense artillery. In the case of counter-terrorism, mitigation would include diplomacy, intelligence gathering and direct action against terrorist groups. Mitigation may also be reflected in long-term planning such as the design of the interstate highway system and the placement of military bases further away from populated areas.

Preparation

Preparation consists of building blast shelters, and pre-positioning information, supplies and emergency infrastructure. For example, most larger cities in the U.S. now have underground emergency operations centers that can perform civil defense coordination. FEMA also has many underground facilities located near major railheads such as the one in Denton, Texas and Mount Weather, Virginia for the same purpose. Other measures would include continuous government inventories of grain silos, the Strategic National Stockpile, the uncapping of the Strategic Petroleum Reserve, the dispersal of truck-transportable bridges, water purification, mobile refineries, mobile decontamination facilities, mobile general and special purpose disaster mortuary facilities such as DMORT and DMORT-WMD, and other aids such as temporary housing to speed civil recovery.

On an individual scale, one means of preparation for exposure to nuclear fallout is to obtain potassium iodide (KI) tablets as a safety measure to protect the human thyroid gland from the uptake of dangerous radioactive iodine. Another measure is to cover the nose, mouth and eyes with a piece of cloth and sunglasses to protect against alpha particles, which are only an internal hazard.

To support and supplement efforts at national, regional and local level with regard to disaster prevention, the preparedness of those responsible for civil protection and the intervention in the event of disaster

- To establish a framework for effective and rapid cooperation between different civil protection services when mutual assistance is needed (police, fire service, healthcare service, public utility provider, voluntary agencies).
- To set up and implement training programs for intervention and coordination teams as well as assessment experts including joint courses and exchange systems.
- To enhance the coherence of actions undertaken at international level in the field of civil protection especially in the context of cooperation.

Preparing also includes sharing information:

- To contribute to the information of the public in view of increasing the level of self-protection of citizens
- To collect and disseminate validated emergency information
- To pool information on national civil protection capabilities, military and medical resources.

- To ensure efficient information sharing between the different authorities.

Response

Response consists first of warning civilians so they can enter Fallout Shelters and protect assets.

Staffing a response is always full of problems in a civil defense emergency. After an attack, conventional full-time emergency services are dramatically overloaded, with conventional fire fighting response times often exceeding several days. Some capability is maintained by local and state agencies, and an emergency reserve is provided by specialized military units, especially civil affairs, Military Police, Judge Advocates and combat engineers.

However, the traditional response to massed attack on civilian population centers is to maintain a mass-trained force of volunteer emergency workers. Studies in World War II showed that lightly trained (40 hours or less) civilians in organized teams can perform up to 95% of emergency activities when trained, liaised and supported by local government. In this plan, the populace rescues itself from most situations, and provides information to a central office to prioritize professional emergency services.

In the 1990s, this concept was revived by the Los Angeles Fire Department to cope with civil emergencies such as earthquakes. The program was widely adopted, providing standard terms for organization. In the U.S., this is now official federal policy, and it is implemented by community emergency response teams, under the Department of Homeland Security, which certifies training programs by local governments, and registers "certified disaster service workers" who complete such training. Recovery

Recovery consists of rebuilding damaged infrastructure, buildings and production. The recovery phase is the longest and ultimately most expensive phase. Once the immediate "crisis" has passed, cooperation fades away and recovery efforts are often politicized or seen as economic opportunities.

Preparation for recovery can be very helpful. If mitigating resources are dispersed before the attack, cascades of social failures can be prevented. One hedge against bridge damage in riverine cities is to subsidize a "tourist ferry" that performs scenic cruises on the river. When a bridge is down, the ferry takes up the load.

Implementation

Some advocates[*who?*] believe that government should change building codes to require autonomous buildings in order to reduce civil societies' dependence on complex, fragile networks of social services.

An example of a crucial need after a general nuclear attack would be the fuel required to transport every other item for recovery. However, oil refineries are large, immobile, and probable targets. One proposal is to preposition truck-mounted fuel refineries near oil fields and bulk storage depots. Other critical infrastructure needs

would include road and bridge repair, communications, electric power, food production, and potable water.

Civil Defense organizations

The old United States civil defense logo. The triangle emphasized the 3-step Civil Defense philosophy used before the foundation of FEMA and Comprehensive Emergency Management.

Civil Defense is also the name of a number of organizations around the world dedicated to protecting civilians from military attacks, as well as to providing rescue services after natural and human-made disasters alike.

In a few countries such as Jordan and Singapore (see Singapore Civil Defence Force), civil defense is essentially the same organization as the fire brigade. In most countries however, civil defense is a government-managed, volunteer-staffed organization, separate from the fire brigade and the ambulance service. As the threat of Cold War eased, a number of such civil defense organizations have been disbanded or mothballed (as in the United Kingdom and the United States civil defense), while others have changed their focuses into providing rescue services after natural disasters (as for the State Emergency Service in Australia). However the ideals of Civil Defense have been brought back in the United States under FEMA's Citizens Corps and CERT. In Ireland, the Civil Defence is still very much an active organisation and is occasionally called upon for its Auxiliary Fire Service and ambulance/rescue services when emergencies such as flash flooding occur and require additional manpower. The organisation has units of trained firemen and medical responders based in key areas around the country.

Global justicece movement is the broad globalized social movement opposing what is often known as “corporate globalization” and promoting equal distribution of economic resources.

A number of organisations and groups using this term have emerged at the beginning of this century - see links and references.

A movement of movements

The global justice movement describes the loose collection of individuals and groups—often referred to as a “movement of movements”—who advocate "fair trade" rules and are critical of current institutions of global economics such as the World Trade Organization.[1] The movement is often labelled the anti-globalization movement by the mainstream media. Those involved, however, frequently deny that they are “anti-globalization,” insisting that they support the globalization of communication and people and oppose only the global expansion of corporate power.[2] The term further indicates an anti-capitalist and universalist perspective on globalization, distinguishing the movement from those opponents of globalization whose politics are based on a conservative defence of national sovereignty.

Important organizational pillars of the movement are Via Campesina, the family farmers' international; Peoples' Global Action, a loose collection of often youthful groups; Jubilee 2000, the Christian-based movement for relieving international debt; Friends of the Earth, the environmentalist international; and some thinktanks like Focus on the Global South and Third World Network [3]. Participants include student groups, NGOs, trade unions, faith-based and peace groups throughout the world. A loose coordination of the movement is taking place on the Social Forums. However, although formal power is often situated in the global South, the resources of North-based NGOs give these disproportionate power to often informally marginalise popular organisations from the South [4].

Massive protests

The movement is characterized by the massive citizen protests and alternative summits which have, for the last decade, accompanied most meetings of the G8, World Trade Organization, International Monetary Fund, and World Bank. The movement came to the attention of many in the US when activists successfully used protests to shut down the 1999 WTO Ministerial in Seattle. This represented, however, just one of a series of massive global justice protests that have included protests at the 1988 World Bank/IMF meetings in Germany,[5] "IMF riots" beginning in Lima in 1975, over cuts in the social safety-net presided over by IMF and other international organizations, and spreading through the world,[6][7] and "water wars" in Bolivia and South Africa.[8]

International solidarity

The global justice movement claims to place a significant emphasis on transnational solidarity uniting activists in the global South and global North. Some have argued that the World Social Forum is one excellent example of this emphasis, bringing activists together from around the world to focus on shared philosophy and campaigning. However others see the World Social Forum as dominated by Northern NGOs, donors and activists and argue that Southern representation is largely organized via Northern donors and their NGOs and that popular organizations in the global South are systematically marginalized or included in a deeply subordinated manner.[9]For this reason many grassroots movements in the South boycott the forum and the NGOs that gatekeep representation at the forum or, in some instance, actively oppose it as just one more space of domination.

Telecommunication and government

Many countries have enacted legislation which conform to the *International Telecommunication Regulations* establish by the International Telecommunication Union (ITU), which is the "leading United Nations agency for information and communication technology issues."[38] In 1947, at the Atlantic City Conference, the ITU decided to "afford international protection to all frequencies registered in a new international frequency list and used in conformity with the Radio Regulation." According to the ITU's *Radio Regulations* adopted in Atlantic City, all frequencies

referenced in the *International Frequency Registration Board*, examined by the board and registered on the *International Frequency List* "shall have the right to international protection from harmful interference."[39]

From a global perspective, there have been political debates and legislation regarding the management of telecommunication and broadcasting. The history of broadcasting discusses some of debates in relation to balancing conventional communication such as printing and telecommunication such as radio broadcasting.[40] The onset of World War II brought on the first explosion of international broadcasting propaganda.[40] Countries, their governments, insurgents, terrorists, and militiamen have all used telecommunication and broadcasting techniques to promote propaganda.[40][41] Patriotic propaganda for political movements and colonization started the mid 1930s. In 1936 the BBC would broadcast propaganda to the Arab World to partly counteract similar broadcasts from Italy, which also had colonial interests in the region.[40]

Modern insurgents, such as those in the latest Iraq war, often use intimidating telephone calls, SMSs and the distribution of sophisticated videos of an attack on coalition troops within hours of the operation. "The Sunni insurgents even have their own television station, Al-Zawraa, which while banned by the Iraqi government, still broadcasts from Erbil, Iraqi Kurdistan, even as coalition pressure has forced it to switch satellite hosts several times.[41]]

Modern operation

Telephone

In an analogue telephone network, the caller is connected to the person he wants to talk to by switches at various telephone exchanges. The switches form an electrical connection between the two users and the setting of these switches is determined electronically when the caller dials the number. Once the connection is made, the caller's voice is transformed to an electrical signal using a small microphone in the caller's handset. This electrical signal is then sent through the network to the user at the other end where it is transformed back into sound by a small speaker in that person's handset. There is a separate electrical connection that works in reverse, allowing the users to converse.[42][43]

The fixed-line telephones in most residential homes are analogue — that is, the speaker's voice directly determines the signal's voltage. Although short-distance calls may be handled from end-to-end as analogue signals, increasingly telephone service providers are transparently converting the signals to digital for transmission before converting them back to analogue for reception. The advantage of this is that digitized voice data can travel side-by-side with data from the Internet and can be perfectly reproduced in long distance communication (as opposed to analogue signals that are inevitably impacted by noise).

Mobile phones have had a significant impact on telephone networks. Mobile phone subscriptions now outnumber fixed-line subscriptions in many markets. Sales of mobile phones in 2005 totalled 816.6 million with that figure being almost equally shared amongst the markets of Asia/Pacific (204 m), Western Europe (164 m), CEMEA (Central Europe, the Middle East and Africa) (153.5 m), North America (148 m) and Latin America (102 m).[44] In terms of new subscriptions over the five years from 1999, Africa has outpaced other markets with 58.2% growth.[45] Increasingly these phones are being serviced by systems where the voice content is transmitted digitally such as GSM or W-CDMA with many markets choosing to depreciate analogue systems such as AMPS.[46]

There have also been dramatic changes in telephone communication behind the scenes. Starting with the operation of TAT-8 in 1988, the 1990s saw the widespread adoption of systems based on optic fibres. The benefit of communicating with optic fibres is that they offer a drastic increase in data capacity. TAT-8 itself was able to carry 10 times as many telephone calls as the last copper cable laid at that time and today's optic fibre cables are able to carry 25 times as many telephone calls as TAT-8.[47] This increase in data capacity is due to several factors: First, optic fibres are physically much smaller than competing technologies. Second, they do not suffer from crosstalk which means several hundred of them can be easily bundled together in a single cable.[48] Lastly, improvements in multiplexing have led to an exponential growth in the data capacity of a single fibre.[49][50]

Assisting communication across many modern optic fibre networks is a protocol known as Asynchronous Transfer Mode (ATM). The ATM protocol allows for the side-by-side data transmission mentioned in the second paragraph. It is suitable for public telephone networks because it establishes a pathway for data through the network and associates a traffic contract with that pathway. The traffic contract is essentially an agreement between the client and the network about how the network is to handle the data; if the network cannot meet the conditions of the traffic contract it does not accept the connection. This is important because telephone calls can negotiate a contract so as to guarantee themselves a constant bit rate, something that will ensure a caller's voice is not delayed in parts or cut-off completely.[51] There are competitors to ATM, such as Multiprotocol Label Switching (MPLS), that perform a similar task and are expected to supplant ATM in the future.[52]

Radio and television

In a broadcast system, the central high-powered broadcast tower transmits a high-frequency electromagnetic wave to numerous low-powered receivers. The high-frequency wave sent by the tower is modulated with a signal containing visual or audio information. The receiver is then tuned so as to pick up the high-frequency wave and a demodulator is used to retrieve the signal containing the visual or audio information. The broadcast signal can be either analogue (signal is varied continuously with respect to the information) or digital (information is encoded as a set of discrete values).[21][53]

The broadcast media industry is at a critical turning point in its development, with many countries moving from analogue to digital broadcasts. This move is made possible by the production of cheaper, faster and more capable integrated circuits. The chief advantage of digital broadcasts is that they prevent a number of complaints with traditional analogue broadcasts. For television, this includes the elimination of problems such as snowy pictures, ghosting and other distortion. These occur because of the nature of analogue transmission, which means that perturbations due to noise will be evident in the final output. Digital transmission overcomes this problem because digital signals are reduced to discrete values upon reception and hence small perturbations do not affect the final output. In a simplified example, if a binary message 1011 was transmitted with signal amplitudes [1.0 0.0 1.0 1.0] and received with signal amplitudes [0.9 0.2 1.1 0.9] it would still decode to the binary message 1011 — a perfect reproduction of what was sent. From this example, a problem with digital transmissions can also be seen in that if the noise is great enough it can significantly alter the decoded message. Using forward error correction a receiver can correct a handful of bit errors in the resulting message but too much noise will lead to incomprehensible output and hence a breakdown of the transmission.[54][55]

In digital television broadcasting, there are three competing standards that are likely to be adopted worldwide. These are the ATSC, DVB and ISDB standards; the adoption of these standards thus far is presented in the captioned map. All three standards use MPEG-2 for video compression. ATSC uses Dolby Digital AC-3 for audio compression, ISDB uses Advanced Audio Coding (MPEG-2 Part 7) and DVB has no standard for audio compression but typically uses MPEG-1 Part 3 Layer 2.[56][57] The choice of modulation also varies between the schemes. In digital audio broadcasting, standards are much more unified with practically all countries choosing to adopt the Digital Audio Broadcasting standard (also known as the Eureka 147 standard). The exception being the United States which has chosen to adopt HD Radio. HD Radio, unlike Eureka 147, is based upon a transmission method known as in-band on-channel transmission that allows digital information to "piggyback" on normal AM or FM analogue transmissions.[58]

However, despite the pending switch to digital, analogue television remains transmitted in most countries. An exception is the United States that ended analogue television transmission on the 12th of June 2009[59] after twice delaying the switch over deadline. For analogue television, there are three standards in use (see a map on adoption here). These are known as PAL, NTSC and SECAM. For analogue radio, the switch to digital is made more difficult by the fact that analogue receivers are a fraction of the cost of digital receivers.[60][61] The choice of modulation for analogue radio is typically between amplitude modulation (AM) or frequency modulation (FM). To achieve stereo playback, an amplitude modulated subcarrier is used for stereo FM.

The Internet

The Internet is a worldwide network of computers and computer networks that can communicate with each other using the Internet Protocol.[62] Any computer on the Internet has a unique IP address that can be used by other computers to route

information to it. Hence, any computer on the Internet can send a message to any other computer using its IP address. These messages carry with them the originating computer's IP address allowing for two-way communication. The Internet is thus an exchange of messages between computers.[63]

As of 2008, an estimated 21.9% of the world population has access to the Internet with the highest access rates (measured as a percentage of the population) in North America (73.6%), Oceania/Australia (59.5%) and Europe (48.1%).[64] In terms of broadband access, Iceland (26.7%), South Korea (25.4%) and the Netherlands (25.3%) led the world.[65]

The Internet works in part because of protocols that govern how the computers and routers communicate with each other. The nature of computer network communication lends itself to a layered approach where individual protocols in the protocol stack run more-or-less independently of other protocols. This allows lower-level protocols to be customized for the network situation while not changing the way higher-level protocols operate. A practical example of why this is important is because it allows an Internet browser to run the same code regardless of whether the computer it is running on is connected to the Internet through an Ethernet or Wi-Fi connection. Protocols are often talked about in terms of their place in the OSI reference model (pictured on the right), which emerged in 1983 as the first step in an unsuccessful attempt to build a universally adopted networking protocol suite.[66]

For the Internet, the physical medium and data link protocol can vary several times as packets traverse the globe. This is because the Internet places no constraints on what physical medium or data link protocol is used. This leads to the adoption of media and protocols that best suit the local network situation. In practice, most intercontinental communication will use the Asynchronous Transfer Mode (ATM) protocol (or a modern equivalent) on top of optic fibre. This is because for most intercontinental communication the Internet shares the same infrastructure as the public switched telephone network.

At the network layer, things become standardized with the Internet Protocol (IP) being adopted for logical addressing. For the World Wide Web, these “IP addresses” are derived from the human readable form using the Domain Name System (e.g. 72.14.207.99 is derived from www.google.com). At the moment, the most widely used version of the Internet Protocol is version four but a move to version six is imminent.[67]

At the transport layer, most communication adopts either the Transmission Control Protocol (TCP) or the User Datagram Protocol (UDP). TCP is used when it is essential every message sent is received by the other computer where as UDP is used when it is merely desirable. With TCP, packets are retransmitted if they are lost and placed in order before they are presented to higher layers. With UDP, packets are not ordered or retransmitted if lost. Both TCP and UDP packets carry port numbers with them to specify what application or process the packet should be handled by.[68] Because certain application-level protocols use certain ports, network administrators can manipulate traffic to suit particular requirements. Examples are to restrict

Internet access by blocking the traffic destined for a particular port or to affect the performance of certain applications by assigning priority.

Above the transport layer, there are certain protocols that are sometimes used and loosely fit in the session and presentation layers, most notably the Secure Sockets Layer (SSL) and Transport Layer Security (TLS) protocols. These protocols ensure that the data transferred between two parties remains completely confidential and one or the other is in use when a padlock appears in the address bar of your web browser.[69] Finally, at the application layer, are many of the protocols Internet users would be familiar with such as HTTP (web browsing), POP3 (e-mail), FTP (file transfer), IRC (Internet chat), BitTorrent (file sharing) and OSCAR (instant messaging).

Local area networks

Despite the growth of the Internet, the characteristics of local area networks (computer networks that run at most a few kilometres) remain distinct. This is because networks on this scale do not require all the features associated with larger networks and are often more cost-effective and efficient without them.

In the mid-1980s, several protocol suites emerged to fill the gap between the data link and applications layer of the OSI reference model. These were Appletalk, IPX and NetBIOS with the dominant protocol suite during the early 1990s being IPX due to its popularity with MS-DOS users. TCP/IP existed at this point but was typically only used by large government and research facilities.[70] As the Internet grew in popularity and a larger percentage of traffic became Internet-related, local area networks gradually moved towards TCP/IP and today networks mostly dedicated to TCP/IP traffic are common. The move to TCP/IP was helped by technologies such as DHCP that allowed TCP/IP clients to discover their own network address — a functionality that came standard with the AppleTalk/IPX/NetBIOS protocol suites.[71]

It is at the data link layer though that most modern local area networks diverge from the Internet. Whereas Asynchronous Transfer Mode (ATM) or Multiprotocol Label Switching (MPLS) are typical data link protocols for larger networks, Ethernet and Token Ring are typical data link protocols for local area networks. These protocols differ from the former protocols in that they are simpler (e.g. they omit features such as Quality of Service guarantees) and offer collision prevention. Both of these differences allow for more economic set-ups.[72]

Despite the modest popularity of Token Ring in the 80's and 90's, virtually all local area networks now use wired or wireless Ethernet. At the physical layer, most wired Ethernet implementations use copper twisted-pair cables (including the common 10BASE-T networks). However, some early implementations used coaxial cables and some recent implementations (especially high-speed ones) use optic fibres.[73] Where optic fibre is used, the distinction must be made between multi-mode fibre and single-mode fibre. Multi-mode fibre can be thought of as thicker optical fibre that is cheaper to manufacture devices for but that suffers from less usable bandwidth and greater attenuation (i.e. poor long-distance performance).

Global information system

Definition

There is a variety of definitions and understandings of a Global Information System (GIS, GLIS), such as

- **A global information system (GLIS)** is an information system which is developed and / or used in a global context. [1]
- A **global information system** (GLIS) is any information system which attempts to deliver the totality of measurable data worldwide within a defined context. (USF)

The term Global Information System has the same acronym is the same, the meaning is different from the term Geographic Information Systems.

Common to this class of information systems is that the context is a global setting, either for its use or development process. This means that it highly relates to distributed systems / distributed computing where the distribution is global. The term also incorporates aspects of global software development and there outsourcing (when the outsourcing locations are globally distribtued) and offshoring aspects. A specific aspect of global information systems is the case (domain) of global software development [2]. A main research aspect in this field concerns the coordination of and collarboation between virtual teams [3] [4]. Further important aspects are the internationalization and language localization of system components.

Tasks in Global Information Systems Design

Critical tasks in the design of Global Information Systems are

- **Process and System Design:** How are the processes between distributed actors organized, how are the systems distributed / integrated.
- **Technical architecture:** What is the technical infrastructure enabling actors to collaborate?
- **Support mechanisms:** How are actors in the process of communication, collaboration, cooperation supported?

A variety of examples can be found - basically, every multi-lingual website can be seen as a global information system. However, mostly a GLIS is referred as a specific system developed or used in the global context.

Examples

Specific examples are

- Systems developed for multinational users, e.g., SAP as a global ERP system
- Global Information Systems for Education: The Global Learning Objects Brokered Exchange
- Support systems for global cooperation: Systems, e.g. Palantir

- For the specific case of data integration : http://data.un.org,

Non-governmental organization

Non-governmental organization (**NGO**) is a term that has become widely accepted as referring to a legally constituted, non-governmental organization created by natural or legal persons with no participation or representation of any government. In the cases in which NGOs are funded totally or partially by governments, the NGO maintains its non-governmental status and excludes government representatives from membership in the organization. Unlike the term *intergovernmental organization*, "non-governmental organization" is a term in general use but is not a legal definition. In many jurisdictions these types of organization are defined as "civil society organizations" or referred to by other names.

The number of internationally operating NGOs is estimated at 40,000.[1] National numbers are even higher: Russia has 277,000 NGOs.[2] India is estimated to have between 1 million and 2 million NGOs.[3]

History

International non-governmental organizations have a history dating back to at least 1839.[4] Rotary, later Rotary International, was founded in 1904. It has been estimated that by 1914 there were 1083 NGOs.[5] International NGOs were important in the anti-slavery movement and the movement for women's suffrage, and reached a peak at the time of the World Disarmament Conference.[6] However, the phrase "non-governmental organization" only came into popular use with the establishment of the United Nations Organization in 1945 with provisions in Article 71 of Chapter 10 of the United Nations Charter[7] for a consultative role for organizations which are neither governments nor member states—see Consultative Status. The definition of "international NGO" (INGO) is first given in resolution 288 (X) of ECOSOC on February 27, 1950: it is defined as "any international organization that is not founded by an international treaty". The vital role of NGOs and other "major groups" in sustainable development was recognized in Chapter 27[8] of Agenda 21, leading to intense arrangements for a consultative relationship between the United Nations and non-governmental organizations.[9]

Rapid development of the non-governmental sector occurred in western countries as a result of the processes of restructurization of the welfare state. Further globalisation of that process occurred after the fall of the communist system and was an important part of the Washington consensus [10].

Globalization during the 20th century gave rise to the importance of NGOs. Many problems could not be solved within a nation. International treaties and international organizations such as the World Trade Organization were perceived as being too centred on the interests of capitalist enterprises. Some argued that in an attempt to counterbalance this trend, NGOs have developed to emphasize humanitarian issues, developmental aid and sustainable development. A prominent

example of this is the World Social Forum which is a rival convention to the World Economic Forum held annually in January in Davos, Switzerland. The fifth World Social Forum in Porto Alegre, Brazil, in January 2005 was attended by representatives from more than 1,000 NGOs.[*citation needed*] Some have argued that in forums like these, NGOs take the place of what should belong to popular movements of the poor. Others argue that NGOs are often imperialist in nature, that they sometimes operate in a racialized manner in dominant countries, and that they fulfill a similar function to that of the clergy during the high colonial era. The philosopher Peter Hallward argues that they are an aristocratic form of politics. However, this philosophy would suggest that organizations of indigenous peoples are not represented, which is untrue. [11] Whatever the case, NGO transnational networking is now extensive.[12]

Types of NGOs

Apart from "NGO", often alternative terms are used as for example: independent sector, volunteer sector, civil society, grassroots organizations, transnational social movement organizations, private voluntary organizations, self-help organizations and non-state actors (NSA's).

Non-governmental organizations are a heterogeneous group. A long list of acronyms has developed around the term "NGO".

These include:

- BINGO is short for business-oriented international NGO, or big international NGO;
- CSO, short for civil society organization;
- DONGO: Donor Organized NGO;
- ENGO: short for environmental NGO, such as Global 2000;
- GONGOs are government-operated NGOs, which may have been set up by governments to look like NGOs in order to qualify for outside aid or promote the interests of the government in question;
- INGO stands for international NGO; Education charter international is an international NGO
- QUANGOs are quasi-autonomous non-governmental organizations, such as the International Organization for Standardization (ISO). (The ISO is actually not purely an NGO, since its membership is by nation, and each nation is represented by what the ISO Council determines to be the 'most broadly representative' standardization body of a nation. That body might itself be a nongovernmental organization; for example, the United States is represented in ISO by the American National Standards Institute, which is independent of the federal government. However, other countries can be represented by national governmental agencies; this is the trend in Europe.)
- TANGO: short for technical assistance NGO;
- GSO: Grassroots Support Organization
- MANGO: short for market advocacy NGO

There are also numerous classifications of NGOs. The typology the World Bank uses divides them into Operational and Advocacy:[13]

The primary purpose of an operational NGO is the design and implementation of development-related projects. One frequently used categorization is the division into *relief-oriented* versus *development-oriented* organizations; they can also be classified according to whether they stress service delivery or participation; or whether they are religious or secular; and whether they are more public or private-oriented. Operational NGOs can be community-based, national or international.

The primary purpose of an Advocacy NGO is to defend or promote a specific cause. As opposed to operational project management, these organizations typically try to raise awareness, acceptance and knowledge by lobbying, press work and activist events.

USAID refers to NGOs as *private voluntary organisations*. However many scholars have argued that this definition is highly problematic as many NGOs are in fact state and corporate funded and managed projects with professional staff.[*citation needed*] Furthermore it has often been argued that USAID is in fact a key arm of American imperialism and that it sets up and supports NGOs in order to further imperial agendas. [14]

NGOs exist for a variety of reasons, usually to further the political or social goals of their members or funders. Examples include improving the state of the natural environment, encouraging the observance of human rights, improving the welfare of the disadvantaged, or representing a corporate agenda. However, there are a huge number of such organizations and their goals cover a broad range of political and philosophical positions. This can also easily be applied to private schools and athletic organizations.

Methods

NGOs vary in their methods. Some act primarily as lobbyists, while others primarily conduct programs and activities. For instance, an NGO such as Oxfam, concerned with poverty alleviation, might provide needy people with the equipment and skills to find food and clean drinking water, whereas an NGO like the FFDA helps through investigation and documentation of human rights violations and provides legal assistance to victims of human rights abuses. Others, such as Afghanistan Information Management Services, provide specialized technical products and services to support development activities implemented on the ground by other organizations.

Public relations

Non-governmental organizations need healthy relationships with the public to meet their goals. Foundations and charities use sophisticated public relations campaigns to raise funds and employ standard lobbying techniques with governments. Interest groups may be of political importance because of their ability to influence social and political outcomes.

Consulting

Many international NGOs have a consultative status with United Nations agencies relevant to their area of work. As an example, the Third World Network has a consultative status with the UN Conference on Trade and Development (UNCTAD) and the UN Economic and Social Council (ECOSOC). While in 1946, only 41 NGOs had consultative status with the ECOSOC, by 2003 this number had risen to 3,550.

Project management

There is an increasing awareness that management techniques are crucial to project success in non-governmental organizations.[15] Generally, non-governmental organizations that are private have either a community or environmental focus. They address varieties of issues such as religion, emergency aid, or humanitarian affairs. They mobilize public support and voluntary contributions for aid; they often have strong links with community groups in developing countries, and they often work in areas where government-to-government aid is not possible. NGOs are accepted as a part of the international relations landscape, and while they influence national and multilateral policy-making, increasingly they are more directly involved in local action.

Staffing

Not all people working for non-governmental organizations are volunteers. The reasons people volunteer are not necessarily purely altruistic, and can provide immediate benefits for themselves as well as those they serve, including skills, experience, and contacts.

There is some dispute as to whether expatriates should be sent to developing countries. Frequently this type of personnel is employed to satisfy a donor who wants to see the supported project managed by someone from an industrialized country. However, the expertise these employees or volunteers may have can be counterbalanced by a number of factors: the cost of foreigners is typically higher, they have no grassroot connections in the country they are sent to, and local expertise is often undervalued.[13]

The NGO sector is an important employer in terms of numbers.[*citation needed*] For example, by the end of 1995, CONCERN worldwide, an international Northern NGO working against poverty, employed 174 expatriates and just over 5,000 national staff working in ten developing countries in Africa and Asia, and in Haiti.

Funding

Large NGOs may have annual budgets in the hundreds of millions or billions of dollars. For instance, the budget of the American Association of Retired Persons (AARP) was over US$540 million in 1999.[16] Funding such large budgets demands significant fundraising efforts on the part of most NGOs. Major sources of NGO funding include membership dues, the sale of goods and services, grants from

international institutions or national governments, and private donations. Several EU-grants provide funds accessible to NGOs.

Even though the term "non-governmental organization" implies independence from governments, most NGOs depend heavily on governments for their funding[10]. A quarter of the US$162 million income in 1998 of the famine-relief organization Oxfam was donated by the British government and the EU. The Christian relief and development organization World Vision collected US$55 million worth of goods in 1998 from the American government. Nobel Prize winner Médecins Sans Frontières (MSF) (known in the USA as Doctors Without Borders) gets 46% of its income from government sources

Monitoring and control

In a March 2000 report on United Nations Reform priorities, former U.N. Secretary General Kofi Annan wrote in favor of international humanitarian intervention, arguing that the international community has a "right to protect" citizens of the world against ethnic cleansing, genocide, and crimes against humanity. On the heels of the report, the Canadian government launched the Responsibility to Protect R2PPDF (434 KiB) project, outlining the issue of humanitarian intervention. While the R2P doctrine has wide applications, among the more controversial has been the Canadian government's use of R2P to justify its intervention and support of the coup in Haiti.

Years after R2P, the World Federalist Movement, an organization which supports "the creation of democratic global structures accountable to the citizens of the world and call for the division of international authority among separate agencies", has launched Responsibility to Protect - Engaging Civil Society (R2PCS). A collaboration between the WFM and the Canadian government, this project aims to bring NGOs into lockstep with the principles outlined under the original R2P project.

The governments of the countries an NGO works or is registered in may require reporting or other monitoring and oversight. Funders generally require reporting and assessment, such information is not necessarily publicly available. There may also be associations and watchdog organizations that research and publish details on the actions of NGOs working in particular geographic or program areas.[*citation needed*]

In recent years, many large corporations have increased their corporate social responsibility departments in an attempt to preempt NGO campaigns against certain corporate practices. As the logic goes, if corporations work *with* NGOs, NGOs will not work *against* corporations.

In December 2007, The United States Department of Defense Assistant Secretary of Defense (Health Affairs) [1] established an International Health Division under Force Health Protection & Readiness [2]. Part of International Health's mission is to communicate with NGOs in areas of mutual interest. Department of Defense Directive 3000.05 [3], in 2005, requires DoD to regard stability-enhancing activities as a mission of importance equal to warfighting. In compliance with international law, DoD has necessarily built a capacity to improve essential services in areas of

conflict such as Iraq, where the customary lead agencies (State Department and USAID) find it difficult to operate. Unlike the "co-option" strategy described for corporations, the OASD(HA) recognizes the neutrality of health as an essential service. International Health cultivates collaborative relationships with NGOs, albeit at arms-length, recognizing their traditional independence, expertise and honest broker status. While the goals of DoD and NGOs may seem incongruent, the DoD's emphasis on stability and security to reduce and prevent conflict suggests, on careful analysis, important mutual interests.

Legal status

The legal form of NGOs is diverse and depends upon homegrown variations in each country's laws and practices. However, four main family groups of NGOs can be found worldwide:[18]

- Unincorporated and voluntary association
- Trusts, charities and foundations
- Companies not just for profit
- Entities formed or registered under special NGO or nonprofit laws

NGOs are not subjects of international law, as states are. An exception is the International Committee of the Red Cross, which is subject to certain specific matters, mainly relating to the Geneva Convention.

The Council of Europe in Strasbourg drafted the European Convention on the Recognition of the Legal Personality of International Non-Governmental Organizations in 1986, which sets a common legal basis for the existence and work of NGOs in Europe. Article 11 of the European Convention on Human Rights protects the right to freedom of association, which is also a fundamental norm for NGOs.] Citizen organization

There is a growing movement within the “non”-profit and “non”-government sector to define itself in a more constructive, accurate way. Instead of being defined by “non” words, organizations are suggesting new terminology to describe the sector. The term “civil society organization” (CSO) has been used by a growing number of organizations, such as the Center for the Study of Global Governance. The term “citizen sector organization” (CSO) has also been advocated to describe the sector — as one of citizens, for citizens. This labels and positions the sector as its own entity, without relying on language used for the government or business sectors. However some have argued that this is not particularly helpful given that most NGOs are in fact funded by governments and business and that some NGOs are clearly hostile to independently organized people's organizations.

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Course Name	: Basic Statistics

Course Description

The Course encompasses different forms of statistics, the appropriate methods of calculating the central tendency, understanding how to estimate various scales in determining range, use of variations and sequences, standard deviation and statistics related to cross tabulation.

Course objectives

- To equip students with analytical skills and statistical concepts useful in decision making.
- To improve their knowledge of describing and interpreting statistical records.
- To enable them get firm exposure to data collection, presentation, and analysis and interpretation for rational decisions on crucial matters.

Course Content

Introduction to statistics

- Definition of Statistics
- Common uses of statistics
- Relevance of statistics in an economy
- Types of statistics i.e descriptive, inferential statistics

Methods of calculating the central tendency

- Mean
- Mode
- Median
- Average

Estimates of scale

- Standard deviation
- Interquartile range
- Range
- Mean difference
- Median absolute deviation
- Average absolute deviation
- Sources of statistical dispersion

Statistics related to cross tabulation

- Chi-square
- Contingency coefficient
- Cramer's V
- Lambda coefficient
- Phi coefficient
- Kendall tau

Statistical Inference

- Definition of statistical inference
- Exploratory data analysis
- Exploratory data Analysis Development(EDAD)

Variance

- Definition of variance
- Forms of variance i.e continuous case, discrete case
- Approximating the variance of a function
- Distinguish between population and variance and sample variance
- Generalizations of variances

Skewness

- Definition of Skewness
- Forms of Skewness ie Sample Skewness, kurtosis
- Sample kurtosis
- Formulas for calculating kurtosis ie mean absolute error, interquartile range,

Standard deviation

- Definition of standard deviation
- Probability distribution or random variable
- Steps in calculating standard deviation
- Simplification of the formula
- Estimating population standard deviation

Mode of delivery Face to face lectures

Assessment

Course work 40%

Exams 60%

Total Mark 100%

Descriptive statistics

STATISTICS – a body of principles and methods of extracting inform ation from numerical data. It is divided into two broad categories: inferential and descriptive statistics.

Descriptive statistics – the methods of organizing, summarizing and presenting data in convenient meaningful and easy to interpret forms e.g tables, graphs, charts, averages, variations from averages. Are used to describe the main features of a collection of data in quantitative terms. Descriptive statistics are distinguished from inferential statistics (or inductive statistics), in that descriptive statistics aim to quantitatively summarize a data set, rather than being used to support inferential statements about the population that the data are thought to represent. Even when a data analysis draws its main conclusions using inductive statistical analysis, descriptive statistics are generally presented along with more formal analyses, to give the audience an overall sense of the data being analyzed.

Common uses

A common example of the use of descriptive statistics occurs in medical research studies. In a paper reporting on a study involving human subjects, there typically appears a table giving the overall sample size, sample sizes in important subgroups (e.g. for each treatment or exposure group), and demographic or clinical characteristics such as the average age, the proportion of subjects with each gender, and the proportion of subjects with related comorbidities.

In research involving comparisons between groups, a major emphasis is often placed on the significance level for the hypothesis that the groups being compared differ to a greater degree than would be expected by chance. This significance level is often represented as a p-value, or sometimes as the standard score of a test statistic. In contrast, an effect size is a descriptive statistic that conveys the estimated magnitude and direction of the difference between groups, without regard to whether the difference is statistically significant. Reporting significance levels without effect sizes is often criticized, since for large sample sizes even small effects of little practical importance can be highly statistically significant.

Examples of descriptive statistics

Most statistics can be used either as a descriptive statistic, or in an inductive analysis. For example, we can report the average reading test score for the students in each classroom in a school, to give a descriptive sense of the typical scores and their variation. If we perform a formal hypothesis test on the scores, we are doing inductive rather than descriptive analysis.

Some statistical summaries are especially common in descriptive analyses. Some examples follow.

- Measures of central tendency , Measures of dispersion , Measures of association , Cross-tab, contingency table , Histogram , Quantile, Q-Q plot , Scatterplot , Box plot .

INFERENTIAL STATISTICS – that body of methods used to draw conclusions about characteristics of a population based on information available from a sample taken scientifically from that population, e.g., given that UTL has 70,000 subscribers and 30,000 potential subscribers. If UTL wanted to introduce new communication methods, it my sample only 10% of its population. This leaves a chance of making errors.

However, statistical methods have ways of determining the reliability of statistical inference

Reliability: where a repeated measurement gives a similar if not exact value as before. This depends on: - the tool of measurement, -the competence of the person doing the measurement and -the consistency of the data.

The sample should be drawn using a probabilistic method (representative and luck of bias). Non probabilistic methods is not applicable in inferential statistics.

Population: is the total set of elements or characters under obsevation/study. It may consist of measurements, companies, a set of accounts, etc.

Sample: is a sub set of a population and a descriptive measure of the sample is known as a **statistic.**

ESTIMATION

Samples estimate parameters. Whereas a parameter for a specific population is a constant, a statistic is a variable.

The process of estimating, forecasting or making decisions about the population from sample information is called statistical inference and is the primary purpose of statistics. Populations are often large making it impractical to inquire from every member of a population.

Decision makers use statistics to estimate parameters. because of the uncertainty sorrounding the estimation techniques, each statistic must be acconpanied by a measure of reliability of inference.

Average

In mathematics, an **average**, **central tendency**[1] of a data set is a measure of the "middle" or "expected" value of the data set. There are many different descriptive statistics that can be chosen as a measurement of the central tendency of the data items. These include means, the median and the mode. Other statistical measures such as the standard deviation and the range are called measures of spread and describe how spread out the data is.

An average is a single value that is meant to typify a list of values. If all the numbers in the list are the same, then this number should be used. If the numbers are not all the same, an easy way to get a representative value from a list is to randomly pick any number from the list. However, the word 'average' is usually reserved for more sophisticated methods that are generally found to be more useful. In the latter case, the average is calculated by combining the values from the set in a specific way and computing a single number as being the average of the set.

The most common method is the arithmetic mean but there are many other types of averages, such as median (which is used most often when the distribution of the values is skewed with some small numbers of very high values, as seen with house prices or incomes).[2]

Calculation

Arithmetic mean

Main article: Arithmetic mean

If n numbers are given, each number denoted by a_i, where $i = 1, \ldots, n$, the arithmetic mean is the [sum] of the a_i's divided by n or

The arithmetic mean, often simply called the mean, of two numbers, such as 2 and 8, is obtained by finding a value A such that 2 + 8 = A + A. One may find that $A = (2 + 8)/2 = 5$. Switching the order of 2 and 8 to read 8 and 2 does not change the resulting value obtained for A. The mean 5 is not less than the minimum 2 nor greater than the maximum 8. If we increase the number of terms in the list for which we want an average, we get, for example, that the arithmetic mean of 2, 8, and 11 is found by solving for the value of A in the equation $2 + 8 + 11 = A + A + A$. One finds that $A = (2 + 8 + 11)/3 = 7$.

Changing the order of the three members of the list does not change the result: A $(8 + 11 + 2)/3 = 7$ and that 7 is between 2 and 11. This summation method is easily generalized for lists with any number of elements. However, the mean of a list of integers is not necessarily an integer. "The average family has 1.7 children" is a jarring way of making a statement that is more appropriately expressed by "the average number of children in the collection of families examined is 1.7".

Geometric mean

The geometric mean of n numbers is obtained by multiplying them all together and then taking the nth root. In algebraic terms, the geometric mean of $a_1, a_2, \ldots, a_n$ is defined as

Geometric mean can be thought of as the antilog of the arithmetic mean of the logs of the numbers.

Example: Geometric mean of 2 and 8 is

Harmonic mean

Harmonic mean for a set of numbers $a_1, a_2, \ldots, a_n$ is defined as the reciprocal of the arithmetic mean of the reciprocals of a_i's:

One example where it is useful is calculating the average speed. For example, if the speed for going from point A to B was 60 km/h, and the speed for returning from B to A was 40 km/h, then the average speed is given by

Inequality concerning AM, GM, and HM

A well known inequality concerning arithmetic, geometric, and harmonic means for any set of positive numbers is

It is easy to remember noting that the alphabetical order of the letters A, G, and H is preserved in the inequality. See Inequality of arithmetic and geometric means.

Mode and median

The most frequently occurring number in a list is called the mode. The mode of the list (1, 2, 2, 3, 3, 3, 4) is 3. The mode is not necessarily well defined, the list (1, 2, 2, 3, 3, 5) has the two modes 2 and 3. The mode can be subsumed under the general method of defining averages by understanding it as taking the list and setting each member of the list equal to the most common value in the list if there is a most common value. This list is then equated to the resulting list with all values replaced by the same value. Since they are already all the same, this does not require any change. The mode is more meaningful and potentially useful if there are many numbers in the list, and the frequency of the numbers progresses smoothly (e.g., if out of a group of 1000 people, 30 people weigh 61 kg, 32 weigh 62 kg, 29 weigh 63 kg, and all the other possible weights occur less frequently, then 62 kg is the mode).

The mode has the advantage that it can be used with non-numerical data (e.g., red cars are most frequent), whilst other averages cannot.

The median is the middle number of the group when they are ranked in order. (If there are an even number of numbers, the mean of the middle two is taken.)

Thus to find the median, order the list according to its elements' magnitude and then repeatedly remove the pair consisting of the highest and lowest values until either one or two values are left. If exactly one value is left, it is the median; if two values, the median is the arithmetic mean of these two. This method takes the list 1, 7, 3, 13 and orders it to read 1, 3, 7, 13. Then the 1 and 13 are removed to obtain the list 3, 7. Since there are two elements in this remaining list, the median is their arithmetic mean, (3 + 7)/2 = 5.

Definitions

Mean

Mode The most frequent value in the data set

Median The middle value that separates the higher half from the lower half of the data set

Truncated Mean The arithmetic mean of data values after a certain number or proportion of the highest and lowest data values have been discarded

Interquartile mean A special case of the truncated mean, using the interquartile range

Winsorized mean Similar to the truncated mean, but, rather than deleting the extreme values, they are set equal to the largest and smallest values that remain

Geometric mean A rotation invariant extension of the median for points in R^n

Solutions to variational problems

Several measures of central tendency can be characterized as solving a variational problem, in the sense of the calculus of variations, namely minimizing variation from the center. That is, given a measure of statistical dispersion, one asks for a measure of central tendency that minimizes variation: such that variation from the center is

minimal among all choices of center. In a quip, "dispersion precedes location". In the sense of L^p spaces, the correspondence is:

L^p	Dispersion	central tendency
L^1	average absolute deviation	median
L^2	standard deviation	mean
L^∞	maximum deviation	midrange

Thus standard deviation about the mean is lower than standard deviation about any other point, and the maximum deviation about the midrange is lower than the maximum deviation about any other point. The uniqueness of this characterization of mean follows from convex optimization. Indeed, for a given (fixed) data set x, the function represents the dispersion about a constant value c relative to the L^2 norm. Because the function f_2 is a strictly convex coercive function, the minimizer exists and is unique.

Note that the median in this sense is not in general unique, and in fact any point between the two central points of a discrete distribution minimizes average absolute deviation. The dispersion in the L^1 norm, given by

is not *strictly* convex, whereas strict convexity is needed to ensure uniqueness of the minimizer. In spite of this, the minimizer is unique for the L^∞ norm.

Miscellaneous types

Other more sophisticated averages are: trimean, trimedian, and normalized mean.

One can create one's own average metric using generalized f-mean:

where f is any invertible function. The harmonic mean is an example of this using $f(x) = 1/x$, and the geometric mean is another, using $f(x) = \log x$. Another example, expmean (exponential mean) is a mean using the function $f(x) = e^x$, and it is inherently biased towards the higher values. However, this method for generating means is not general enough to capture all averages. A more general method for defining an average, y, takes any function of a list $g(x_1, x_2, \ldots, x_n)$, which is symmetric under permutation of the members of the list, and equates it to the same function with the value of the average replacing each member of the list: $g(x_1, x_2, \ldots, x_n) = g(y, y, \ldots, y)$. This most general definition still captures the important property of all averages that the average of a list of identical elements is that element itself. The function $g(x_1, x_2, \ldots, x_n) = x_1 + x_2 + \ldots + x_n$ provides the arithmetic mean. The function $g(x_1, x_2, \ldots, x_n) = x_1 \cdot x_2 \cdot \ldots \cdot x_n$ provides the geometric mean. The function $g(x_1, x_2, \ldots, x_n) = x_1^{-1} + x_2^{-1} + \ldots + x_n^{-1}$ provides the harmonic mean. (See John Bibby (1974) “Axiomatisations of the average and a further generalisation of monotonic sequences,” Glasgow Mathematical Journal, vol. 15, pp. 63–65.)

In data streams

The concept of an average can be applied to a stream of data as well as a bounded set, the goal being to find a value about which recent data is in some way clustered.

The stream may be distributed in time, as in samples taken by some data acquisition system from which we want to remove noise, or in space, as in pixels in an image from which we want to extract some property. An easy-to-understand and widely used application of average to a stream is the simple moving average in which we compute the arithmetic mean of the most recent N data items in the stream. To advance one position in the stream, we add 1/N times the new data item and subtract 1/N times the data item N places back in the stream.

Averages of functions

The concept of average can be extended to functions.[3] In calculus, the average value of an integrable function f on an interval $[a,b]$ is defined by

Etymology

An early meaning (c. 1500) of the word *average* is "damage sustained at sea". The root is found in Arabic as *awar*, in Italian as *avaria* and in French as *avarie*. Hence an *average adjuster* is a person who assesses an insurable loss.

Marine damage is either *particular average*, which is borne only by the owner of the damaged property, or general average, where the owner can claim a proportional contribution from all the parties to the marine venture. The type of calculations used in adjusting general average gave rise to the use of "average" to mean "arithmetic mean".

However, according to the Oxford English Dictionary, the earliest usage in English (1489 or earlier) appears to be an old legal term for a tenant's day labour obligation to a sheriff, probably anglicised from "avera" found in the English Domesday Book (1085). This pre-existing term thus lay to hand when an equivalent for *avarie* was wanted.

Statistical dispersion

In statistics, **statistical dispersion** (also called **statistical variability** or **variation**) is variability or spread in a variable or a probability distribution. Common examples of measures of statistical dispersion are the variance, standard deviation and interquartile range.

Dispersion is contrasted with location or central tendency, and together they are the most used properties of distributions.

Measures of statistical dispersion

A measure of statistical dispersion is a real number that is zero if all the data are identical, and increases as the data becomes more diverse. It cannot be less than zero.

Most measures of dispersion have the **same scale as the quantity being measured.** In other words, if the measurements have units, such as metres or seconds, the measure of dispersion has the same units. Such measures of dispersion include:

ESTIMATES OF SCALE

- Standard deviation
- Interquartile range
- Range

- Mean difference
- Median absolute deviation
- Average absolute deviation (or simply called average deviation)

These are frequently used (together with scale factors) as estimators of scale parameters, in which capacity they are called **estimates of scale.**

All the above measures of statistical dispersion have the useful property that they are **location-invariant**, as well as linear in scale. So if a random variable X has a dispersion of S_X then a linear transformation $Y = aX + b$ for real a and b should have dispersion $S_Y = |a|S_X$.

Other measures of dispersion are **dimensionless (scale-free)**. In other words, they have no units even if the variable itself has units. These include:

- Coefficient of variation
- Quartile coefficient of dispersion
- Relative mean difference, equal to twice the Gini coefficient

There are other measures of dispersion:

- Variance (the square of the standard deviation) — location-invariant but not linear in scale.
- Variance-to-mean ratio — mostly used for count data when the term coefficient of dispersion is used and when this ratio is dimensionless, as count data are themselves dimensionless: otherwise this is not scale-free.

Some measures of dispersion have specialized purposes, among them the Allan variance and the Hadamard variance.

For categorical variables, it is less common to measure dispersion by a single number. See qualitative variation. One measure which does so is the discrete entropy.

Sources of statistical dispersion

In the physical sciences, such variability may result only from random measurement errors: instrument measurements are often not perfectly precise, i.e., reproducible. One may assume that the quantity being measured is unchanging and stable, and that the variation between measurements is due to observational error.

In the biological sciences, this assumption is false: the variation observed might be *intrinsic* to the phenomenon: distinct members of a population differ greatly. This is also seen in the arena of manufactured products; even there, the meticulous scientist finds variation.

The simple model of a stable quantity is preferred when it is tenable. Each phenomenon must be examined to see if it warrants such a simplification.

Association (statistics)

In statistics, an **association** is any relationship between two measured quantities that renders them statistically dependent.[1] The term "association" refers broadly to any such relationship, whereas the narrower term "correlation" refers to a linear relationship between two quantities.

There are many statistical measures of association that can be used to infer the presence or absence of an association in a sample of data. Examples of such measures include the product moment correlation coefficient, used mainly for quantitative measurements, and the odds ratio, used for dichotomous measurements. Other measures of association are the tetrachoric correlation coefficient and Goodman and Kruskal's lambda

In quantitative research, the term "association" is often used to emphasize that a relationship being discussed is not necessarily causal (see correlation does not imply causation).

Cross tabulation

A **cross tabulation** (often abbreviated as **cross tab**) displays the joint distribution of two or more variables. They are usually presented as a contingency table in a matrix format. Whereas a frequency distribution provides the distribution of one variable, a contingency table describes the distribution of two or more variables simultaneously.

The following is a fictitious example of a 3 × 2 contingency table. The variable “Wikipedia usage” has three categories: heavy user, light user, and non user. These categories are all inclusive so the columns sum to 100%. The other variable "underpants" has two categories: boxers, and briefs. These categories are not all inclusive so the rows need not sum to 100%. Each cell gives the percentage of subjects who share that combination of traits.

	boxers	briefs
heavy Wiki user	70%	5%
light Wiki user	25%	35%
non Wiki user	5%	60%

Cross tabs are frequently used because:

1. They are easy to understand. They appeal to people who do not want to use more sophisticated measures.
2. They can be used with any level of data: nominal, ordinal, interval, or ratio - cross tabs treat all data as if it is nominal.
3. A table can provide greater insight than single statistics.
4. It solves the problem of empty or sparse cells.
5. They are simple to conduct.

Statistics related to cross tabulations

The following list is not comprehensive.

- **Chi-square** - This tests the statistical significance of the cross tabulations. Chi-squared should not be calculated for percentages. The cross tabs must be

converted back to absolute counts (numbers) before calculating chi-squared. Chi-squared is also problematic when any cell has a joint frequency of less than five. For an in-depth discussion of this issue see Fienberg, S.E. (1980). "The Analysis of Cross-classified Categorical Data." 2nd Edition. M.I.T. Press, Cambridge, MA.

- **Contingency coefficient** - This tests the strength of association of the cross tabulations. It is a variant of the **phi coefficient** that adjusts for statistical significance. Values range from 0 (no association) to 1 (the theoretical maximum possible association).
- **Cramer's V** - This tests the strength of association of the cross tabulations. It is a variant of the **phi coefficient** that adjusts for the number of rows and columns. Values range from 0 (no association) to 1 (the theoretical maximum possible association).
- **Lambda coefficient** — This tests the strength of association of the cross tabulations when the variables are measured at the nominal level. Values range from 0 (no association) to 1 (the theoretical maximum possible association). **Asymmetric lambda** measures the percentage improvement in predicting the dependent variable. **Symmetric lambda** measures the percentage improvement when prediction is done in both directions.
- **phi coefficient** - If both variables instead are nominal and dichotomous, phi coefficient is a measure of the degree of association between two binary variables. This measure is similar to the correlation coefficient in its interpretation. Two binary variables are considered positively associated if most of the data falls along the diagonal cells. In contrast, two binary variables are considered negatively associated if most of the data falls off the diagonal.
- **Kendall tau**:
    - **Tau b** - This tests the strength of association of the cross tabulations when both variables are measured at the ordinal level. It makes adjustments for ties and is most suitable for square tables. Values range from -1 (100% negative association, or perfect inversion) to +1 (100% positive association, or perfect agreement). A value of zero indicates the absence of association.
    - **Tau c** - This tests the strength of association of the cross tabulations when both variables are measured at the ordinal level. It makes adjustments for ties and is most suitable for rectangular tables. Values range from -1 (100% negative association, or perfect inversion) to +1 (100% positive association, or perfect agreement). A value of zero indicates the absence of association.
- **Gamma** - This tests the strength of association of the cross tabulations when both variables are measured at the ordinal level. It makes no adjustment for either table size or ties. Values range from -1 (100% negative association, or perfect inversion) to +1 (100% positive association, or perfect agreement). A value of zero indicates the absence of association.
- **Uncertainty coefficient**, **entropy coefficient** or **Theil's U**

Histogram

In statistics, a **histogram** is a graphical display of tabulated frequencies, shown as bars. It shows what proportion of cases fall into each of several categories: it is a form of data binning. The categories are usually specified as non-overlapping intervals of some variable. The categories (bars) must be adjacent. The intervals (or bands, or bins) are generally of the same size.[1]

Histograms are used to plot density of data, and often for density estimation: estimating the probability density function of the underlying variable. The total area of a histogram used for probability density is always normalized to 1. If the length of the intervals on the x-axis are all 1, then a histogram is identical to a relative frequency plot.

An alternative to the histogram is kernel density estimation, which uses a kernel to smooth samples. This will construct a smooth probability density function, which will in general more accurately reflect the underlying variable.

The histogram is one of the seven basic tools of quality control, which also include the Pareto chart, check sheet, control chart, cause-and-effect diagram, flowchart, and scatter diagram.

Etymology

The word *histogram* derived from the Greek *histos* 'anything set upright' (as the masts of a ship, the bar of a loom, or the vertical bars of a histogram); and *gramma* 'drawing, record, writing'. The term was introduced by Karl Pearson in 1895.[2]
Examples

As an example we consider data collected by the U.S. Census Bureau on time to travel to work (2000 census, [1], Table 2). The census found that there were **124 million people** who work outside of their homes. This rounding is a common phenomenon when collecting data from people.

This histogram shows the number of cases per unit interval so that the height of each bar is equal to the proportion of total people in the survey who fall into that category. The area under the curve represents the total number of cases (124 million). This type of histogram shows absolute numbers.

In other words a histogram represents a frequency distribution by means of rectangles whose widths represent class intervals and whose areas are proportional to the corresponding frequencies. They only place the bars together to make it easier to compare data.

Activities and demonstrations

The SOCR resource pages contain a number of hands-on interactive activities demonstrating the concept of a histogram, histogram construction and manipulation using Java applets and charts.

Mathematical definition

An ordinary and a cumulative histogram of the same data. The data shown is a random sample of 10,000 points from a normal distribution with a mean of 0 and a standard deviation of 1.

In a more general mathematical sense, a histogram is a mapping m_i that counts the number of observations that fall into various disjoint categories (known as *bins*), whereas the graph of a histogram is merely one way to represent a histogram. Thus, if we let n be the total number of observations and k be the total number of bins, the histogram m_i meets the following conditions:

Cumulative histogram

A cumulative histogram is a mapping that counts the cumulative number of observations in all of the bins up to the specified bin. That is, the cumulative histogram M_i of a histogram m_i is defined as:

Number of bins and width

There is no "best" number of bins, and different bin sizes can reveal different features of the data. Some theoreticians have attempted to determine an optimal number of bins, but these methods generally make strong assumptions about the shape of the distribution. You should always experiment with bin widths before choosing one (or more) that illustrate the salient features in your data.

The number of bins k can be calculated directly, or from a suggested bin width h:

The braces indicate the ceiling function.

Sturges' formula[3]

,

which implicitly bases the bin sizes on the range of the data, and can perform poorly if $n < 30$.

Scott's choice[4]

,

where σ is the sample standard deviation.

Freedman-Diaconis' choice[5]

,

which is based on the interquartile range.

Continuous data

The idea of a histogram can be generalized to continuous data. Let (see Lebesgue space), then the cumulative histogram operator H can be defined by:

$H(f)(y) =$ with only finitely many intervals of monotony this can be rewritten as

$h(f)(y)$ is undefined if y is the value of a stationary point.

Density estimation

- Kernel density estimation, a smoother but more complex method of density estimation

Quantile

Quantiles are points taken at regular intervals from the cumulative distribution function (CDF) of a random variable. Dividing ordered data into q essentially equal-sized data subsets is the motivation for q-quantiles; the quantiles are the data values marking the boundaries between consecutive subsets. Put another way, the kth q-quantile for a random variable is the value x such that the probability that the random variable will be less than x is at most $k \ / \ q$ and the probability that the random variable will be more than x is at most $(q - k) \ / \ q$. There are $q - 1$ quantiles, with k an integer satisfying $0 < k < q$.

Median of the order statistics

Alternatively, one may use estimates of the *median* of the order statistics, which one can compute based on estimates of the median of the order statistics of a uniform distribution and the quantile function of the distribution; this was suggested by (Filliben 1975).[3]

This can be easily generated for any distribution for which the quantile function can be computed, but conversely the resulting estimates of location and scale are no longer precisely the least squares estimates, though these only differ significantly for *n* small.

Statistical inference

Statistical inference or **statistical induction** comprises the use of statistics and random sampling to make inferences concerning some unknown aspect of a population. It is distinguished from descriptive statistics.

Two schools of statistical inference are frequency probability and Bayesian inference.

Definition

Statistical inference is inference about a population from a random sample drawn from it or, more generally, about a random process from its observed behavior during a finite period of time. It includes:

1. Point estimation
2. Interval estimation

3. Hypothesis testing (or statistical significance testing)
4. Prediction – see predictive inference

There are several distinct schools of thought about the justification of statistical inference. All are based on some idea of what real world phenomena can be reasonably modeled as probability.

1. Frequency probability
2. Bayesian probability
3. Fiducial probability

The topics below are usually included in the area of **statistical inference**.

1. Statistical assumptions
2. Statistical decision theory
3. Estimation theory
4. Statistical hypothesis testing
5. Revising opinions in statistics
6. Design of experiments, the analysis of variance, and regression
7. Survey sampling
8. Summarizing statistical data

Exploratory data analysis

From Wikipedia, the free encyclopedia

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Exploratory data analysis (EDA) is an approach to analyzing data for the purpose of formulating hypotheses worth testing, complementing the tools of conventional statistics for testing hypotheses[1]. It was so named by John Tukey to contrast with Confirmatory Data Analysis, the term used for the set of ideas about hypothesis testing, p-values, confidence intervals etc. which formed the key tools in the arsenal of practicing statisticians at the time.

EDA development

Tukey held that too much emphasis in statistics was placed on statistical hypothesis testing (confirmatory data analysis); more emphasis needed to be placed on using data to suggest hypotheses to test. In particular, he held that confusing the two types of analyses and employing them on the same set of data can lead to systematic bias owing to the issues inherent in testing hypotheses suggested by the data.

The objectives of EDA are to:

- Suggest hypotheses about the causes of observed phenomena
- Assess assumptions on which statistical inference will be based
- Support the selection of appropriate statistical tools and techniques
- Provide a basis for further data collection through surveys or experiments

Many **EDA** techniques have been adopted into data mining and are being taught to young students as a way to introduce them to statistical thinking.[2]

Variance

In probability theory and statistics, the **variance** of a random variable, probability distribution, or sample is a measure of statistical dispersion, averaging the squares of the deviations of its possible values from its expected value (mean). Whereas the mean is a way to describe the location of a distribution, the variance is a way to capture its scale or degree of being spread out. The unit of variance is the square of the unit of the original variable. The positive square root of the variance, called the standard deviation, has the same units as the original variable and can be easier to interpret for this reason.

The variance of a real-valued random variable is its second central moment, and it also happens to be its second cumulant. Just as some distributions do not have a mean, some do not have a variance. The mean exists whenever the variance exists, but not vice versa.

Definition

If a random variable X has expected value (mean) $\mu = \mathrm{E}(X)$, then the variance $\mathrm{Var}(X)$ of X is given by:

This definition encompasses random variables that are discrete, continuous, or neither. Of all the points about which squared deviations could have been calculated, the mean produces the minimum value for the averaged sum of squared deviations.

This definition is expanded as follows:

The variance of random variable X is typically designated as $\mathrm{Var}(X)$, , or simply σ^2 (pronounced "sigma squared"). If a distribution does not have an expected value, as is the case for the Cauchy distribution, it does not have a variance either. Many other distributions for which the expected value does exist do not have a finite variance because the relevant integral diverges. An example is a Pareto distribution whose Pareto index k satisfies $1 < k \leq 2$.

Continuous case

If the random variable X is continuous with probability density function $p(x)$,

where

and where the integrals are definite integrals taken for x ranging over the range of X.

Discrete case

If the random variable X is discrete with probability mass function

$x_1 \mapsto p_1, \ldots, x_n \mapsto p_n$, then

(When such a discrete weighted variance is specified by weights whose sum is not 1, then one divides by the sum of the weights.) That is, it is the expected value of the square of the deviation of X from its own mean. In plain language, it can be expressed as "The average of the square of the distance of each data point from the mean". It is thus the *mean squared deviation*.

Examples

Exponential distribution

The exponential distribution with parameter λ is a continuous distribution whose support is the semi-infinite interval $[0,\infty)$. Its probability density function is given by:

and it has expected value $\mu = \lambda^{-1}$. Therefore the variance is equal to:

So for an exponentially distributed random variable $\sigma^2 = \mu^2$.

Fair die

A six-sided fair die can be modelled with a discrete random variable with outcomes 1 through 6, each with equal probability $1/6$. The expected value is $(1+2+3+4+5+6)/6 = 3.5$. Therefore the variance can be computed to be:

Properties

Variance is non-negative because the squares are positive or zero. The variance of a constant random variable is zero, and the variance of a variable in a data set is 0 if and only if all entries have the same value.

Variance is invariant with respect to changes in a location parameter. That is, if a constant is added to all values of the variable, the variance is unchanged. If all values are scaled by a constant, the variance is scaled by the square of that constant. These two properties can be expressed in the following formula:

The variance of a finite sum of **uncorrelated** random variables is equal to the sum of their variances. This stems from the identity:

and that for uncorrelated variables covariance is zero.

In general, for the sum of N variables: , we have:

1. Suppose that the observations can be partitioned into equal-sized **subgroups** according to some second variable. Then the variance of the total group is equal to the mean of the variances of the subgroups plus the variance of the means of the subgroups. This property is known as variance decomposition or the law of total variance and plays an important role in the analysis of variance. For example, suppose that a group consists of a subgroup of men and an equally large subgroup of women. Suppose that the men have a mean body length of 180 and that the variance of their lengths is 100. Suppose that the women have a mean length of 160 and that the variance of their lengths is 50. Then the mean of the variances is (100 + 50) / 2 = 75; the variance of the means is the variance of 180, 160 which is 100. Then, for the total group of men and women combined, the variance of the body lengths will be 75 + 100 = 175. Note that this uses N for the denominator instead of N − 1.

   In a more general case, if the subgroups have unequal sizes, then they must be weighted proportionally to their size in the computations of the means and variances. The formula is also valid with more than two groups, and even if the grouping variable is continuous.

   This formula implies that the variance of the total group cannot be smaller than the mean of the variances of the subgroups. Note, however, that the total variance is not necessarily larger than the variances of the subgroups. In the above example, when the subgroups are analyzed separately, the variance is

influenced only by the man-man differences and the woman-woman differences. If the two groups are combined, however, then the men-women differences enter into the variance also.

2. Many computational formulas for the variance are based on this equality: **The variance is equal to the mean of the squares minus the square of the mean.** For example, if we consider the numbers 1, 2, 3, 4 then the mean of the squares is (1 × 1 + 2 × 2 + 3 × 3 + 4 × 4) / 4 = 7.5. The mean is 2.5, so the square of the mean is 6.25. Therefore the variance is 7.5 − 6.25 = 1.25, which is indeed the same result obtained earlier with the definition formulas. Many pocket calculators use an algorithm that is based on this formula and that allows them to compute the variance while the data are entered, without storing all values in memory. The algorithm is to adjust only three variables when a new data value is entered: The number of data entered so far (*n*), the sum of the values so far (*S*), and the sum of the squared values so far (*SS*). For example, if the data are 1, 2, 3, 4, then after entering the first value, the algorithm would have *n* = 1, *S* = 1 and *SS* = 1. After entering the second value (2), it would have *n* = 2, *S* = 3 and *SS* = 5. When all data are entered, it would have *n* = 4, *S* = 10 and *SS* = 30. Next, the mean is computed as *M* = *S* / *n*, and finally the variance is computed as *SS* / *n* − *M* × *M*. In this example the outcome would be 30 / 4 − 2.5 × 2.5 = 7.5 − 6.25 = 1.25. If the unbiased sample estimate is to be computed, the outcome will be multiplied by *n* / (*n* − 1), which yields 1.667 in this example.

Properties, formal

Sum of uncorrelated variables (Bienaymé formula)

One reason for the use of the variance in preference to other measures of dispersion is that the variance of the sum (or the difference) of uncorrelated random variables is the sum of their variances:

This statement is called the Bienaymé formula.[1] and was discovered in 1853. It is often made with the stronger condition that the variables are independent, but uncorrelatedness suffices. So if the variables have the same variance σ^2, then, since division by *n* is a linear transformation, this formula immediately implies that the variance of their mean is

That is, the variance of the mean decreases with *n*. This fact is used in the definition of the standard error of the sample mean, which is used in the central limit theorem.

Sum of correlated variables

In general, if the variables are correlated, then the variance of their sum is the sum of their covariances:

(Note: This by definition includes the variance of each variable, since Cov(*X*,*X*)=Var(*X*).)

Here Cov is the covariance, which is zero for independent random variables (if it exists). The formula states that the variance of a sum is equal to the sum of all elements in the covariance matrix of the components. This formula is used in the theory of Cronbach's alpha in classical test theory.

So if the variables have equal variance σ^2 and the average correlation of distinct variables is ρ, then the variance of their mean is

This implies that the variance of the mean increases with the average of the correlations. Moreover, if the variables have unit variance, for example if they are standardized, then this simplifies to

This formula is used in the Spearman-Brown prediction formula of classical test theory. This converges to ρ if n goes to infinity, provided that the average correlation remains constant or converges too. So for the variance of the mean of standardized variables with equal correlations or converging average correlation we have

Therefore, the variance of the mean of a large number of standardized variables is approximately equal to their average correlation. This makes clear that the sample mean of correlated variables does generally not converge to the population mean, even though the Law of large numbers states that the sample mean will converge for independent variables.

Weighted sum of variables

Properties 6 and 8, along with this property from the covariance page: $\text{Cov}(aX, bY) = ab\,\text{Cov}(X, Y)$ jointly imply that

This implies that in a weighted sum of variables, the variable with the largest weight will have a disproportionally large weight in the variance of the total. For example, if X and Y are uncorrelated and the weight of X is two times the weight of Y, then the weight of the variance of X will be four times the weight of the variance of Y.

Decomposition

The general formula for variance decomposition or the law of total variance is: If X and Y are two random variables and the variance of X exists, then

Here, $\text{E}(X|Y)$ is the conditional expectation of X given Y, and $\text{Var}(X|Y)$ is the conditional variance of X given Y. (A more intuitive explanation is that given a particular value of Y, then X follows a distribution with mean $\text{E}(X|Y)$ and variance $\text{Var}(X|Y)$. The above formula tells how to find $\text{Var}(X)$ based on the distributions of these two quantities when Y is allowed to vary.) This formula is often applied in analysis of variance, where the corresponding formula is

$$SS_{\text{Total}} = SS_{\text{Between}} + SS_{\text{Within}}.$$

It is also used in linear regression analysis, where the corresponding formula is

$$SS_{\text{Total}} = SS_{\text{Regression}} + SS_{\text{Residual}}.$$

This can also be derived from the additivity of variances (property 8), since the total (observed) score is the sum of the predicted score and the error score, where the latter two are uncorrelated.

Computational formula

The **computational formula for the variance** follows in a straightforward manner from the linearity of expected values and the above definition:

This is often used to calculate the variance in practice, although it suffers from catastrophic cancellation if the two components of the equation are similar in magnitude.

Characteristic property

The second moment of a random variable attains the minimum value when taken around the first moment (i.e., mean) of the random variable, i.e. . Conversely, if a continuous function satisfies for all random variables X, then it is necessarily of the form , where $a > 0$. This also holds in the multidimensional case.[2]

Calculation from the CDF

The population variance for a non-negative random variable can be expressed in terms of the cumulative distribution function F using

where $H(u) = 1 - F(u)$ is the right tail function. This expression can be used to calculate the variance in situations where the CDF, but not the density, can be conveniently expressed.

Approximating the variance of a function

The delta method uses second-order Taylor expansions to approximate the variance of a function of one or more random variables. For example, the approximate variance of a function of one variable is given by

provided that f is twice differentiable and that the mean and variance of X are finite.[*citation needed*]

Population variance and sample variance

In general, the population variance of a *finite* population of size N is given by

or if the population is an abstract population with probability distribution Pr:

where is the population mean. This is merely a special case of the general definition of variance introduced above, but restricted to finite populations.

In many practical situations, the true variance of a population is not known *a priori* and must be computed somehow. When dealing with infinite populations, this is generally impossible.

A common task is to estimate the variance of a population from a sample. We take a sample with replacement of n values from the population, and estimate the variance on the basis of this sample. There are several good estimators. Two of them are well known:

and

Both are referred to as ***sample variance***.

The two estimators only differ slightly as we see, and for larger values of the sample size n the difference is negligible. While the first one may be seen as the variance of the sample considered as a population, the second one is the unbiased estimator of the population variance, meaning that its expected value $E[S^2]$ is equal to the true variance of the sampled random variable; the use of the term $n - 1$ is called Bessel's correction. The sample variance with $n - 1$ is a U-statistic for the function

$f(x_1,x_2) = (x_1 - x_2)^2 \ / \ 2$ meaning that it is obtained by averaging a 2-sample statistic over 2-element subsets of the population.

While,

Distribution of the sample variance

Being a function of random variables, the sample variance is itself a random variable, and it is natural to study its distribution. In the case that y_i are independent observations from a normal distribution, Cochran's theorem shows that s^2 follows a scaled chi-square distribution:

As a direct consequence, it follows that

If the y_i are independent and identically distributed, but not necessarily normally distributed, then s^2 is unbiased for σ^2. If the conditions of the law of large numbers hold, s^2 is a consistent estimator of σ^2.

Generalizations

Unbiased estimate for expected error in the mean of A for a sample of M data points with sample bias coefficient ρ. The log-log slope -½ line for ρ=0 is the unbiased standard error.

If X is a vector-valued random variable, with values in , and thought of as a column vector, then the natural generalization of variance is , where and is the transpose of X, and so is a row vector. This variance is a positive semi-definite square matrix, commonly referred to as the covariance matrix.

If X is a complex-valued random variable, with values in , then its variance is , where X^* is the complex conjugate of X. This variance is also a positive semi-definite square matrix.

If one's (real) random variables are defined on an n-dimensional continuum **x**, the cross-covariance of variables A[**x**] and B[**x**] as a function of n-dimensional vector displacement (or lag) **Δx** may be defined as $\sigma_{AB}[\mathbf{\Delta x}] \equiv \langle (A[\mathbf{x}+\mathbf{\Delta x}]-\mu_A)(B[\mathbf{x}]-\mu_B) \rangle_{\mathbf{x}}$. Here the population (as distinct from sample) average over **x** is denoted by angle brackets $\langle \ \rangle_{\mathbf{x}}$ or the Greek letter μ.

This quantity, called a second-moment correlation measure because it's a generalization of the second-moment statistic *variance*, is sometimes put into dimensionless form by normalizing with the population standard deviations of A and B (e.g. $\sigma_A \equiv \mathrm{Sqrt}[\sigma_{AA}[0]]$). This results in a correlation coefficient $\rho_{AB}[\mathbf{\Delta x}] \equiv \sigma_{AB}[\mathbf{\Delta x}]/(\sigma_A \sigma_B)$ that takes on values between plus and minus one. When A is the same as B, the foregoing expressions yield values for autocovariance, a quantity also known in scattering theory as the pair-correlation (or Patterson) function.

If one defines *sample bias coefficient* ρ as an average of the autocorrelation-coefficient $\rho_{AA}[\mathbf{\Delta x}]$ over all point pairs in a set of M sample points[3], an unbiased

estimate for *expected error in the mean* of A is the square root of: sample variance (taken as a population) times (1+(M-1)ρ)/((M-1)(1-ρ)). When ρ is much greater than 1/(M-1), this reduces to the square root of: sample variance (taken as a population) times ρ/(1-ρ). When |ρ| is much less than 1/(M-1) this yields the more familiar expression for standard error, namely the square root of: sample variance (taken as a population) over (M-1).

Moment of inertia

The variance of a probability distribution is analogous to the moment of inertia in classical mechanics of a corresponding mass distribution along a line, with respect to rotation about its center of mass. It is because of this analogy that such things as the variance are called *moments* of probability distributions. The covariance matrix is related to the moment of inertia tensor for multivariate distributions. The moment of inertia of a cloud of *n* points with a covariance matrix of Σ is given by

This difference between moment of inertia in physics and in statistics is clear for points that are gathered along a line. Suppose many points are close to the *x* and distributed along it. The covariance matrix might look like

That is, there is the most variance in the *x* direction. However, physicists would consider this to have a low moment *about* the *x* axis so the moment-of-inertia tensor is

Skewness

Example of experimental data with non-zero skewness (gravitropic response of wheat coleoptiles, 1,790)

In probability theory and statistics, **skewness** is a measure of the asymmetry of the probability distribution of a real-valued random variable.

Introduction

Consider the distribution in the figure. The bars on the right side of the distribution taper differently than the bars on the left side. These tapering sides are called *tails*, and they provide a visual means for determining which of the two kinds of skewness a distribution has:

1. **negative skew**: The left tail is longer; the mass of the distribution is concentrated on the right of the figure. It has relatively few low values. The distribution is said to be *left-skewed*. Example (observations): 1,1000,1001,1002,1003
2. **positive skew**: The right tail is longer; the *mass* of the distribution is concentrated on the left of the figure. It has relatively few high values. The distribution is said to be *right-skewed*. Example (observations): 1,2,3,4,100.

In a skewed (unbalanced, lopsided) distribution, the mean is farther out in the long tail than is the median. If there is no skewness or the distribution is symmetric like the bell-shaped normal curve then the mean = median = mode.

Many textbooks teach a rule of thumb stating that the mean is right of the median under right skew, and left of the median under left skew. This rule fails with surprising frequency. It can fail in multimodal distributions, or in distributions where one tail is long but the other is heavy. Most commonly, though, the rule fails

in discrete distributions where the areas to the left and right of the median are not equal. Such distributions not only contradict the textbook relationship between mean, median, and skew, they also contradict the textbook interpretation of the median.[1]

Definition

Skewness, the third standardized moment, is written as γ_1 and defined as

where μ_3 is the third moment about the mean and σ is the standard deviation. Equivalently, skewness can be defined as the ratio of the third cumulant κ_3 and the third power of the square root of the second cumulant κ_2:

This is analogous to the definition of kurtosis, which is expressed as the fourth cumulant divided by the fourth power of the square root of the second cumulant.

The skewness of a random variable X is sometimes denoted Skew[X].

Sample skewness

For a sample of n values the *sample skewness* is

where x_i is the i^{th} value, is the sample mean, m_3 is the sample third central moment, and m_2 is the sample variance.

Given samples from a population, the equation for the sample skewness g_1 above is a biased estimator of the population skewness. The usual estimator of skewness is

where k_3 is the unique symmetric unbiased estimator of the third cumulant and k_2 is the symmetric unbiased estimator of the second cumulant. Unfortunately G_1 is, nevertheless, generally biased. Its expected value can even have the opposite sign from the true skewness; compare unbiased estimation of standard deviation.

Properties

If Y is the sum of n independent random variables, all with the same distribution as X, then it can be shown that Skew[Y] = Skew[X] / $\sqrt{n}$.

Kurtosis

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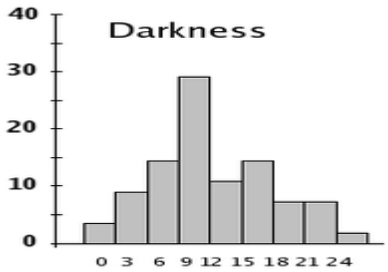
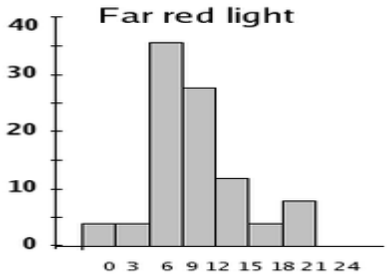
In probability theory and statistics, **kurtosis** (from the Greek word κυρτός, *kyrtos* or *kurtos*, meaning bulging) is a measure of the "peakedness" of the probability distribution of a real-valued random variable. Higher kurtosis means more of the variance is due to infrequent extreme deviations, as opposed to frequent modestly-sized deviations.





The far red light has no effect on the average speed of the gravitropic reaction in wheat coleoptiles, but it changes kurtosis from platykurtic to leptokurtic (−0.194 → 0.055)

Definition

The fourth standardized moment is defined as

$$\frac{\mu_4}{\sigma^4},$$

where μ_4 is the fourth moment about the mean and σ is the standard deviation. This is sometimes used as the definition of kurtosis in older works, but is not the definition used here.

Kurtosis is more commonly defined as the fourth cumulant divided by the square of the second cumulant, which is equal to the fourth moment around the mean divided by the square of the variance of the probability distribution minus 3,

$$\gamma_2 = \frac{\kappa_4}{\kappa_2^2} = \frac{\mu_4}{\sigma^4} - 3,$$

which is also known as **excess kurtosis**. The "minus 3" at the end of this formula is often explained as a correction to make the kurtosis of the normal distribution equal to zero. Another reason can be seen by looking at the formula for the kurtosis of the sum of random variables. Because of the use of the cumulant, if Y is the sum of n independent random variables, all with the same distribution as X, then $\mathrm{Kurt}[Y] = \mathrm{Kurt}[X] / n$, while the formula would be more complicated if kurtosis were defined as μ_4 / σ^4.

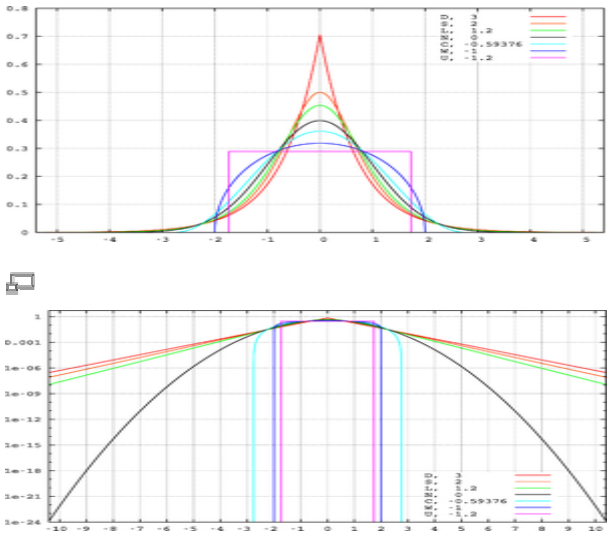
More generally, if $X_1, \ldots, X_n$ are independent random variables all *having the same variance*, then

$$\mathrm{Kurt}\left(\sum_{i=1}^{n} X_i\right) = \frac{1}{n^2}\sum_{i=1}^{n}\mathrm{Kurt}(X_i),$$

whereas this identity would not hold if the definition did not include the subtraction of 3.

The fourth standardized moment must be at least 1, so the excess kurtosis must be −2 or more (the lower bound is realized by the Bernoulli distribution with p = ½, or "coin toss"); there is no upper limit and it may be infinite.

Kurtosis of well-known distributions



In this example we compare several well-known distributions from different parametric families. All densities considered here are unimodal and symmetric. Each has a mean and skewness of zero. Parameters were chosen to result in a variance of unity in each case. The images on the right show curves for the following seven densities, on a linear scale and logarithmic scale:

- D: Laplace distribution, a.k.a. double exponential distribution, red curve (two straight lines in the log-scale plot), excess kurtosis = 3
- S: hyperbolic secant distribution, orange curve, excess kurtosis = 2
- L: logistic distribution, green curve, excess kurtosis = 1.2
- N: normal distribution, black curve (inverted parabola in the log-scale plot), excess kurtosis = 0
- C: raised cosine distribution, cyan curve, excess kurtosis = −0.593762...
- W: Wigner semicircle distribution, blue curve, excess kurtosis = −1
- U: uniform distribution, magenta curve (shown for clarity as a rectangle in both images), excess kurtosis = −1.2.

Note that in these cases the platykurtic densities have bounded support, whereas the densities with positive or zero excess kurtosis are supported on the whole real line.

There exist platykurtic densities with infinite support,

- e.g., exponential power distributions with sufficiently large shape parameter b

and there exist leptokurtic densities with finite support.

- e.g., a distribution that is uniform between −3 and −0.3, between −0.3 and 0.3, and between 0.3 and 3, with the same density in the (−3, −0.3) and (0.3, 3) intervals, but with 20 times more density in the (−0.3, 0.3) interval

Sample kurtosis

For a sample of *n* values the **sample kurtosis** is

$$g_2 = \frac{m_4}{m_2^2} - 3 = \frac{\frac{1}{n}\sum_{i=1}^{n}(x_i - \overline{x})^4}{\left(\frac{1}{n}\sum_{i=1}^{n}(x_i - \overline{x})^2\right)^2} - 3$$

where m_4 is the fourth sample moment about the mean, m_2 is the second sample moment about the mean (that is, the sample variance), x_i is the i^{th} value, and $\overline{x}$ is the sample mean.

The formula

$$D = \frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^2$$

,

$$E = \frac{1}{nD^2}\sum_{i=1}^{n}(x_i - \bar{x})^4 - 3$$

is also used, where n—the sample size, *D*—the pre-computed variance, x_i—the value of the x'th measurement and $\bar{x}$—the pre-computed arithmetic mean.

Mean absolute error

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In statistics, the **mean absolute error** is a quantity used to measure how close forecasts or predictions are to the eventual outcomes. The mean absolute error (MAE) is given by

As the name suggests, the mean absolute error is an average of the absolute errors $e_i = f_i - y_i$, where f_i is the prediction and y_i the true value. Note that alternative formulations may include relative frequencies as weight factors.

The mean absolute error is a common measure of forecast error in time series analysis, where the terms "mean absolute deviation" is sometimes used in confusion with the more standard definition of mean absolute deviation. The same confusion exists more generally.

Interquartile range

From Wikipedia, the free encyclopedia

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In descriptive statistics, the **interquartile range** (**IQR**), also called the **midspread** or **middle fifty**, is a measure of statistical dispersion, being equal to the difference between the third and first quartiles.

Unlike the (total) range, the interquartile range is a robust statistic, having a breakdown point of 25%, and is thus often preferred to the total range.

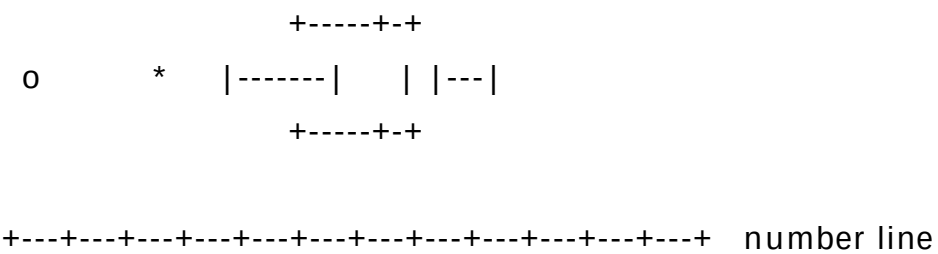
The IQR is used to build box plots, simple graphical representations of a probability distribution.

For a symmetric distribution (so the median equals the midhinge, the average of the first and third quartiles), half the IQR equals the median absolute deviation (MAD).

The median is the corresponding measure of central tendency.

From this table, the width of the interquartile range is 115 − 105 = 10.

Data set in a plain-text box plot



For this data set:

- lower (first) quartile ($Q1$, $x_{.25}$) = 7
- median (second quartile) (Med, $x_{.5}$) = 8.5
- upper (third) quartile ($Q3$, $x_{.75}$) = 9
- interquartile range, $\mathrm{IQR} = Q3 - Q1 = 2$

Interquartile range of distributions

The interquartile range of a continuous distribution can be calculated by integrating the probability density function (which yields the cumulative distribution function—any other means of calculating the CDF will also work). The lower quartile, Q1, is a number such that integral of the PDF from $-\infty$ to Q1 equals 0.25, while the upper quartile, Q3, is such a number that the integral from Q3 to ∞ equals 0.25; in terms of the CDF, the quartiles can be defined as follows:

$$Q1 = \mathrm{CDF}^{-1}(0.25)$$

$$Q3 = \mathrm{CDF}^{-1}(0.75)$$

The interquartile range and median of some common distributions are shown below

Distribution	Median	IQR
Normal	μ	$2\,\Phi^{-1}(0.75) \approx 1.349$
Laplace	μ	$2b \ln(2)$

Cauchy	μ	

Range (statistics)

In descriptive statistics, the **range** is the length of the smallest interval which contains all the data. It is calculated by subtracting the smallest observation (sample minimum) from the greatest (sample maximum) and provides an indication of statistical dispersion.

It is measured in the same units as the data. Since it only depends on two of the observations, it is a poor and weak measure of dispersion except when the sample size is large.

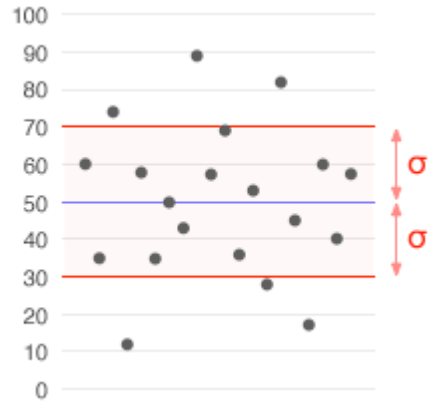
For a population, the range is greater than or equal to twice the standard deviation, which equality only for the coin toss (Bernoulli distribution with $p = ½$).

The range, in the sense of the difference between the highest and lowest scores, is also called the **crude range**. When a new scale for measurement is developed, then a potential maximum or minimum will emanate from this scale. This is called the **potential (crude) range**. Of course this range should not be chosen too small, in order to avoid a ceiling effect. When the measurement is obtained, the resulting smallest or greatest observation, will provide the **observed (crude) range**.

The *midrange* point, i.e. the point halfway between the two extremes, is an indicator of the central tendency of the data. Again it is not particularly robust for small samples.

Standard deviation

A plot of a normal distribution (or bell curve). Each colored band has a width of one standard deviation.



A data set with a mean of 50 (shown in blue) and a standard deviation (σ) of 20.

In probability theory and statistics, **standard deviation** is a measure of the variability or dispersion of a statistical population, a data set, or a probability distribution. A low standard deviation indicates that the data points tend to be very

close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values.

For example, the average height for adult men in the United States is about 70 inches (178 cm), with a standard deviation of around 3 in (8 cm). This means that most men (about 68 percent, assuming a normal distribution) have a height within 3 in (8 cm) of the mean (67–73 in (170–185 cm)), whereas almost all men (about 95%) have a height within 6 in (15 cm) of the mean (64–76 in (163–193 cm)). If the standard deviation were zero, then all men would be exactly 70 in (178 cm) high. If the standard deviation were 20 in (51 cm), then men would have much more variable heights, with a typical range of about 50 to 90 in (127 to 229 cm).

In addition to expressing the variability of a population, standard deviation is commonly used to measure confidence in statistical conclusions. For example, the margin of error in polling data is determined by calculating the expected standard deviation in the results if the same poll were to be conducted multiple times. The reported margin of error is typically about twice the standard deviation – the radius of a 95% confidence interval. In science, researchers commonly report the standard deviation of experimental data, and only effects that fall far outside the range of standard deviation are considered statistically significant—normal random error or variation in the measurements is in this way distinguished from causal variation. Standard deviation is also important in finance, where the standard deviation on the rate of return on an investment is a measure of the volatility of the investment.

The term *standard deviation* was first used[1] in writing by Karl Pearson[2] in 1894, following his use of it in lectures. This was as a replacement for earlier alternative names for the same idea: for example Gauss used "mean error".[3] A useful property of standard deviation is that, unlike variance, it is expressed in the same units as the data.

When only a sample of data from a population is available, the population standard deviation can be estimated by a modified quantity called the sample standard deviation, explained below.

Basic example

Consider a population consisting of the following values:

There are eight data points in total, with a mean (or average) value of 5:

To calculate the population standard deviation, we compute the difference of each data point from the mean, and square the result:

Next we average these values and take the square root, which gives the standard deviation:

Therefore, the above has a population standard deviation of 2.

Note that we are assuming that we are dealing with a complete population. If our 8 values are obtained by random sampling from some parent population, we might prefer to compute the **sample standard deviation** using a denominator of 7 instead of 8. See below for an explanation.

Definition

Probability distribution or random variable

Let X be a random variable with mean value μ:

Here the operator E denotes the average or expected value of X. Then the **standard deviation** of X is the quantity

That is, the standard deviation σ (sigma) is the square root of the average value of $(X - \mu)^2$.

In the case where X takes random values from a finite data set , with each value having the same probability, the standard deviation is

or, using summation notation,

The standard deviation of a (univariate) probability distribution is the same as that of a random variable having that distribution. Not all random variables have a standard deviation, since these expected values need not exist. For example, the standard deviation of a random variable which follows a Cauchy distribution is undefined because its expected value is undefined.

[edit] Continuous random variable

Continuous distributions usually give a formula for calculating the standard deviation as a function of the parameters of the distribution. In general, the standard deviation of a continuous real-valued random variable X with probability density function $p(x)$ is

where

and where the integrals are definite integrals taken for x ranging over the range of X.

Discrete random variable or data set

The standard deviation of a discrete random variable is the root-mean-square (RMS) deviation of its values from the mean.

If the random variable X takes on N values (which are real numbers) with equal probability, then its standard deviation σ can be calculated as follows:

1. Find the mean, , of the values.
2. For each value X_i calculate its deviation () from the mean.
3. Calculate the squares of these deviations.
4. Find the mean of the squared deviations. This quantity is the variance σ^2.
5. Take the square root of the variance.

This calculation is described by the following formula:

where is the arithmetic mean of the values x_i, defined as:

If not all values have equal probability, but the probability of value x_i equals p_i, the standard deviation can be computed by:

and

where

and N' is the number of non-zero weight elements.

The standard deviation of a data set is the same as that of a discrete random variable that can assume precisely the values from the data set, where the point mass for each value is proportional to its multiplicity in the data set.

Example

Suppose we wished to find the standard deviation of the data set consisting of the values 3, 7, 7, and 19.

Step 1: find the arithmetic mean (average) of 3, 7, 7, and 19,

Step 2: find the deviation of each number from the mean,

Step 3: square each of the deviations, which amplifies large deviations and makes negative values positive,

Step 4: find the mean of those squared deviations,

Step 5: take the non-negative square root of the quotient (converting squared units back to regular units),

So, the standard deviation of the set is 6. This example also shows that, in general, the standard deviation is different from the mean absolute deviation (which is 5 in this example).

Note that if the above data set represented only a sample from a greater population, a modified standard deviation would be calculated (explained below) to estimate the population standard deviation, which would give 6.93 for this example.

Simplification of formula

The calculation of the sum of squared deviations can be simplified as follows:

Applying this to the original formula for standard deviation gives:

This can be memorized as taking the square root of (the average of the squares less the square of the average).

Estimating population standard deviation

In the real world, finding the standard deviation of an entire population is unrealistic except in certain cases, (such as standardized testing), where every member of a population is sampled. In most cases, the standard deviation σ is estimated by examining a random sample taken from the population. Some estimators are given below:

With standard deviation of the sample

An estimator for σ sometimes used is the **standard deviation of the sample**, denoted by "s_n" and defined as follows:

This estimator has a uniformly smaller mean squared error than the "sample standard deviation" (see below), and is the maximum-likelihood estimate when the population is normally distributed. But this estimator, when applied to a small or moderately-sized sample, tends to be too low: it is a biased estimator.

With sample standard deviation

The most common estimator for σ used is an adjusted version, the **sample standard deviation,** denoted by "s" and defined as follows:

where is the sample and is the mean of the sample. This correction (the use of $N - 1$ instead of N) is known as Bessel's correction. The reason for this correction is that s^2 is an unbiased estimator for the variance σ^2 of the underlying population, if that variance exists and the sample values are drawn independently with replacement. However, s is *not* an unbiased estimator for the standard deviation σ; it tends to underestimate the population standard deviation.

Note that the term "standard deviation of the sample" is used for the *uncorrected* estimator (using N) whilst the term "sample standard deviation" is used for the *corrected* estimator (using $N - 1$). The denominator $N - 1$ is the number of degrees of freedom in the vector of residuals, .

With interquartile range

The statistic

(1.35 is an approximation) where IQR is the interquartile range of the sample, is a consistent estimate of σ. The interquartile range IQR is the difference of the 3rd quartile of the data and the 1st quartile of the data. The asymptotic relative efficiency (ARE) of this estimator with respect to the one from sample standard deviation is 0.37. Hence, for normal data, it is better to use the one from sample standard deviation; when data is with thicker tails, this estimator can be more efficient.[4][*not in citation given*][*dubious* – *discuss*]

Other estimators

Further information: Unbiased estimation of standard deviation

Although an unbiased estimator for σ is known when the random variable is normally distributed, the formula is complicated and amounts to a minor correction: see Unbiased estimation of standard deviation for more details. Moreover, unbiasedness, (in this sense of the word), is not always desirable: see bias of an estimator.

if we take all weights equal to 1.

Mean difference

The **mean difference** is a measure of statistical dispersion equal to the average absolute difference of two independent values drawn from a probability distribution. A related statistic is the **relative mean difference**, which is the mean difference divided by the arithmetic mean. An important relationship is that the relative mean difference is equal to twice the Gini coefficient, which is defined in terms of the Lorenz curve.

The mean difference is also known as the **absolute mean difference** and the **Gini mean difference**. The mean difference is sometimes denoted by Δ or as MD. The mean deviation is a different measure of dispersion.

Calculation

For a population of size n, with a sequence of values y_i, $i = 1$ to n:

$$MD = \frac{1}{n(n-1)} \Sigma_{i=1}^{n} \Sigma_{j=1}^{n} |y_i - y_j|$$

For a discrete probability function $f(y)$, where y_i, $i = 1$ to n, are the values with nonzero probabilities:

$$MD = \Sigma_{i=1}^{n} \Sigma_{j=1}^{n} f(y_i) f(y_j) |y_i - y_j|$$

For a probability density function $f(x)$:

$$MD = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} f(x)\, f(y)\, |x - y|\, dx\, dy$$

For a cumulative distribution function F(x) with inverse x(F):

$$MD = \int_{0}^{1} \int_{0}^{1} |x(F_1) - x(F_2)|\, dF_1\, dF_2$$

The inverse $x(F)$ may not exist because the cumulative distribution function has jump discontinuities or intervals of constant values. However, the previous formula can still apply by generalizing the definition of $x(F)$:

$x(F_1) = \inf \{y : F(y) \geq F_1\}$.

Relative mean difference

When the probability distribution has a finite and nonzero arithmetic mean, the relative mean difference, sometimes denoted by ∇ or RMD, is defined by

$$RMD = \frac{MD}{\text{arithmetic mean}}.$$

The relative mean difference quantifies the mean difference in comparison to the size of the mean and is a dimensionless quantity. The relative mean difference is equal to twice the Gini coefficient which is defined in terms of the Lorenz curve. This relationship gives complementary perspectives to both the relative mean difference and the Gini coefficient, including alternative ways of calculating their values.

Compared to standard deviation

Both the standard deviation and the mean difference measure dispersion -- how spread out are the values of a population or the probabilities of a distribution. The mean difference is not defined in terms of a specific measure of central tendency, whereas the standard deviation is defined in terms of the deviation from the arithmetic mean. Because the standard deviation squares its differences, it tends to give more weight to larger differences and less weight to smaller differences compared to the mean difference. When the arithmetic mean is finite, the mean difference will also be finite, even when the standard deviation is infinite. See the examples for some specific comparisons.

Sample estimators

For a random sample S from a random variable $\boldsymbol{X}$, consisting of n values y_i, the statistic

$$MD(S) = \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} |y_i - y_j|}{n(n-1)}$$

is a consistent and unbiased estimator of MD(***X***).

The statistic:

$$RMD(S) = \frac{\sum_{i=1}^{n}\sum_{j=1}^{n}|y_i - y_j|}{(n-1)\sum_{i=1}^{n} y_i}$$

is a consistent estimator of RMD(***X***), but is not, in general, unbiased.

Confidence intervals for RMD(***X***) can be calculated using bootstrap sampling techniques.

There does not exist, in general, an unbiased estimator for RMD(***X***), in part because of the difficulty of finding an unbiased estimation for multiplying by the inverse of the mean. For example, even where the sample is known to be taken from a random variable ***X***(*p*) for an unknown *p*, and ***X***(*p*) - 1 has the Bernoulli distribution, so that Pr(***X***(*p*) = 1) = 1 − *p* and Pr(***X***(*p*) = 2) = *p*, then

RMD(***X***(*p*)) = 2*p*(1 − *p*)/(1 + *p*).

But the expected value of any estimator *R*(***S***) of RMD(***X***(*p*)) will be of the form:

$$E(R(S)) = \sum_{i=0}^{n} p^i (1-p)^{n-i} r_i$$

where the r_i are constants. So E(R(**S**)) can never equal RMD(***X***(*p*)) for all *p* between 0 and 1.

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Course Name: Negotiation and Mediation skills

Negotiation occurs in business, non-profit organizations, government branches, legal proceedings, among nations and in personal situations such as marriage, divorce, parenting, and everyday life. The study of the subject is called *negotiation theory*. Professional negotiators are often specialized, such as *union negotiators*, *leverage buyout negotiators*, *peace negotiators*, *hostage negotiators*, or may work under other titles, such as diplomats, legislators or brokers.

The word "negotiation" is from the Latin expression, "negotiatus", past participle of negotiare which means "to carry on business".

Approaches to negotiation

Negotiation typically manifests itself with a trained negotiator acting on behalf of a particular organization or position. It can be compared to mediation where a disinterested third party listens to each sides' arguments and attempts to help craft an agreement between the parties. It is also related to arbitration which, as with a legal proceeding, both sides make an argument as to the merits of their "case" and then the arbitrator decides the outcome for both parties.

There are many different ways to segment negotiation to gain a greater understanding of the essential parts. One view of negotiation involves three basic elements: *process*, *behavior* and *substance*. The process refers to how the parties negotiate: the context of the negotiations, the parties to the negotiations, the tactics used by the parties, and the sequence and stages in which all of these play out. Behavior refers to the relationships among these parties, the communication between them and the styles they adopt. The substance refers to what the parties negotiate over: the agenda, the issues (positions and - more helpfully - interests), the options, and the agreement(s) reached at the end.

Skilled negotiators may use a variety of tactics ranging from negotiation hypnosis, to a straight forward presentation of demands or setting of preconditions to more deceptive approaches such as cherry picking. Intimidation and salami tactics may also play a part in swaying the outcome of negotiations.

The advocate's approach

In the advocacy appracch, a skilled negotiator usually serves as advocate for one party to the negotiation and attempts to obtain the most favorable outcomes possible for that party. In this process the negotiator attempts to determine the minimum outcome(s) the other party is (or parties are) willing to accept, then adjusts their demands accordingly. A "successful" negotiation in the advocacy approach is when the negotiator is able to obtain all or most of the outcomes their party desires, but without driving the other party to permanently break off negotiations, unless the best alternative to a negotiated agreement (BATNA) is acceptable.

Traditional negotiating is sometimes called *win-lose* because of the assumption of a fixed "pie", that one person's gain results in another person's loss. This is only true, however, if only a single issue needs to be resolved, such as a price in a simple sales negotiation.

During the 1960s, Gerard I. Nierenberg recognized the role of negotiation in resolving disputes in personal, business and international relations. He published *The Art of Negotiating*, where he states that the philosophies of the negotiators determine the direction

a negotiation takes. His *Everybody Wins* philosophy assures that all parties benefit from the negotiation process which also produces more successful outcomes than the adversarial "winner takes all" approach.

Getting to YES was published by Roger Fisher and William Ury as part of the Harvard negotiation project. The book's approach, referred to as Principled Negotiation, is also sometimes called mutual gains bargaining. The mutual gains approach has been effectively applied in environmental situations (see Lawrence Susskind and Adil Najam) as well as labor relations where the parties (e.g. management and a labor union) frame the negotiation as "problem solving". If multiple issues are discussed, differences in the parties' preferences make win-win negotiation possible. For example, in a labor negotiation, the union might prefer job security over wage gains. If the employers have opposite preferences, a trade is possible that is beneficial to both parties. Such a negotiation is therefore not an adversarial zero-sum game.

There are a tremendous number of other scholars who have contributed to the field of negotiation, including Holly Schroth at UC Berkeley, Gerard E. Watzke at Tulane University, Sara Cobb at George Mason University, Len Riskin at the University of Missouri, Howard Raiffa at Harvard, Robert McKersie and Lawrence Susskind at MIT, and Adil Najam and Jeswald Salacuse at The Fletcher School of Law and Diplomacy.

The new creative approach

Perhaps the most famous negotiation parable involves an argument over an orange. The most obvious approach was to simply cut it in half, each person getting a fair share. But, when the negotiators began talking to each other, exchanging information about their interests, a better solution to the problem became obvious. The person wanting the orange for juice for breakfast took that part and the person wanting the rind for making marmalade took that part. Both sides ended up with more. Neither agreement is particularly creative. The parable of the orange becomes a story about creativity when both parties decide to cooperate in planting an orange tree or even an orchard. In a similar way, Boeing buys composite plastic wings for its new 787 Dreamliner designed and manufactured by Japanese suppliers, and then sells the completed 787s back to Japanese airlines, all with a nice subsidy from the Japanese government. This is what is meant by creativity in negotiations. At business schools these days much is being learned about creative processes. Courses are offered and dissertations proffered with "innovation" as the key buzz word at academic conferences and in corporate boardrooms. And, the more heard about innovation and creative processes the greater is the appreciation that the Japanese approach to negotiations, by nature, uses many of the techniques commonly emphasized in any discussion of creative processes. Indeed, there appears to be a deeply fundamental explanation why the Japanese have been able to build such a successful society despite their lack of natural resources and relative isolation. While Japanese society does have its own obstacles to creativity – hierarchy and collectivism are two – they have developed a negotiation style that in many ways obviates such disadvantages. Indeed, the ten new rules for global negotiations advocated by Hernandez and Graham[3] nicely coincide with an approach that comes naturally to the Japanese:

1. Accept only creative outcomes
2. Understand cultures, especially your own.
3. Don't just adjust to cultural differences, exploit them.
4. Gather intelligence and reconnoiter the terrain.
5. Design the information flow and process of meetings.
6. Invest in personal relationships.

7. Persuade with questions. Seek information and understanding.
8. Make no concessions until the end.
9. Use techniques of creativity
10. Continue creativity after negotiations.

Beyond the practices of the Japanese, credit must also be given to the luminaries in field that have long advocated creativity in negotiations. Howard Raiffaand his colleagues recommend: ...the teams should think and plan together informally and do some joint brainstorming, which can be thought of as “dialoguing” or “prenegotiating.” The two sides make no tradeoffs, commitments, or arguments about how to divide the pie at this early stage. Roger Fisher and William Ury title their Chapter 4 in *Getting to Yes*, “Invent[ing] Options for Mutual Gain.” David Lax and James Sebenius, in their important new book, *3D-Negotiations*go past getting to yes, and talk about “creative agreements” and “great agreements.” Lawrence Susskindand his associates recommend “parallel informal negotiations” toward building creative negotiation outcomes. These ideas must be pushed to the forefront in thinking about negotiations. The field generally is still stuck in the past, talking about “making deals” and “solving problems” as above. Even the use of terms like “win-win” expose the vestiges of the old competitive thinking. The point is that a negotiation is not something that can be won or lost, and the competitive metaphor limits creativity. The problem-solving metaphor does as well. Thus, the first rule of negotiations is: Accept only creative outcomes! Lynda Lawrence at IdeaWorks, a Newport Beach consulting firm has developed a most useful list of ways to generate more ideas during negotiations:

10 Ways to Generate More Ideas

1. Establish common goals of what this "collaboration" would create. A more workable deal? Some common long term goals? A closer partnership?
2. Establish the rules of engagement. The purpose of the exercise is to resolve differences in creative ways that work better for both parties. All ideas are possibilities, and research shows that combining ideas from different cultures can result in better outcomes than those from a single culture.
3. Trust is key, and difficult to establish in many cultures. Certain techniques might speed that process a little. Being offsite, for example. Establishing physical proximity that unconsciously signals intimacy.
4. Add diversity (gender, culture, extroverts, different work specialties, experts, outsiders) to the group. Indeed, the diversity associated with international teams and alliances is the real goldmine of creativity in negotiations.
5. Use storytelling. This both helps establish who you are and what point of view you are bringing to this collaboration.
6. Work in small groups. Add physical movement. Tell the participants to relax, play, sing, have fun, and silence is ok.
7. Work holistically and using visuals. If, for example, there are three sticking points where neither side is happy, agree to work on those points by spending a short time – 10 minutes – on each point where both sides offer "crazy" suggestions. Use techniques of improvisation. Neither side should be offended by the crazy ideas. No one should criticize. Explain that by exploring crazy ideas that better ideas are often generated.
8. Sleep on it. This enables the unconscious to work on the problems, and gives negotiators time to collect opinions before meeting again the next day. Other kinds of breaks, coffee, etc. are also helpful. The overnight part is particularly important. Anthropologist and consumer expert Clotaire Rapaille [9] suggests that the transitions between wakefulness and sleep allow new kinds of thinking “...calming their brainwaves, getting them to that tranquil point just before sleep” (page 8).

9. Doing this process over several sessions allows both sides to feel that progress is being made, and actually generates better and more polished ideas that both sides can invest in.
10. It is the process of creating something together, rather than the specific proposals, which creates bonding around a shared task and establishes new ways of working together. Each side feels honored and all can feel that something is being accomplished.

For the Japanese reader, some of these will be quite familiar. It's easy to get Japanese in close physical proximity (#3), they've been living that way for millennia. In Japanese companies there are not so much marketing specialists as different from engineers as different from finance analysts. Each executive may have worked in several functional areas, limiting the "chimney effect" often associated disparagingly with American firms (#4). Physical movement (#6) – picture the start of the day at the typical Japanese factory. The Japanese also seem to work best in small groups (#6). Silence is definitely ok (part of #6). The Japanese invented karaoke (#6 and singing). The Japanese have difficulty criticizing others, especially foreigners (#7). The use of visuals and holistic thinking are natural for Japanese (#7). Breaks are also a common procedure for Japanese (#8). Japanese will work better with people with whom they are familiar (#9).

It should also be noted that some of these techniques will seem foreign to Japanese negotiators. For example, diversity is not a strong suit for Japanese – purposefully adding women and other elements of diversity (#4) to their groups would seem odd. However, the two key things the Japanese do in negotiation that others can and should learn are: First, the Japanese are the absolute champion information vacuums on the planet. They keep their mouths shut and let everyone else do the talking. Thus, they use the diversity of their international colleagues (customers, suppliers, competitors, scientists, etc.) to a greater extent than any other society. Often this is denigrated as copying and borrowing, but in fact being open to everyone's ideas has always been the key to creativity and human progress. While the Japanese, like everyone else around the world, are ethnocentric, they still very much respect foreign ideas. Second, the Japanese will only work with dolphins (cooperative negotiators), that is, when they have a choice. Trust and creativity go hand-in-hand. And, they will work to train their foreign counterparts to behave more cooperatively for the latter's own good. Witness the 25-year joint venture between Toyota and General Motors for manufacturing small cars in Fremont, CA as a prominent example.

Application of principles of creativity will be appropriate in at least three points during negotiations. Above noted was Howard Raiffa's suggestion that they be used in pre-negotiation meetings. Second, others advocate their use when impasses are reached. For example, in the negotiations regarding the Rio Urubamba natural gas project in Peru, the involved firms and environmentalist groups reached what at the time seemed to be an irreconcilable difference -- roads and a huge pipeline through the pristine forest would be an ecological disaster. The creative solution? Think of the remote gas field as an offshore platform, run the pipeline underground, and fly in personnel and equipment as needed.

Finally, even when negotiators have arrived at "yes," a scheduled review of the agreement may actually move the relationship past "yes" to truly creative outcomes. Perhaps such a review might be scheduled six months after implementation of the agreement has begun. But, the point is time must be set aside for a creative discussion of how to improve on the agreed to relationship? The emphasis of such a session should always be putting new ideas on the table – the answers to the question "what haven't we thought of?"

Other Negotiation Styles

Shell identified five styles/responses to negotiation. Individuals can often have strong dispositions towards numerous styles; the style used during a negotiation depends on the context and the interests of the other party, among other factors. In addition, styles can change over time.

1. **Accommodating**: Individuals who enjoy solving the other party's problems and preserving personal relationships. Accommodators are sensitive to the emotional states, body language, and verbal signals of the other parties. They can, however, feel taken advantage of in situations when the other party places little emphasis on the relationship.
2. **Avoiding**: Individuals who do not like to negotiate and don't do it unless warranted. When negotiating, avoiders tend to defer and dodge the confrontational aspects of negotiating; however, they may be perceived as tactful and diplomatic.
3. **Collaborating**: Individuals who enjoy negotiations that involve solving tough problems in creative ways. Collaborators are good at using negotiations to understand the concerns and interests of the other parties. They can, however, create problems by transforming simple situations into more complex ones.
4. **Competing**: Individuals who enjoy negotiations because they present an opportunity to win something. Competitive negotiators have strong instincts for all aspects of negotiating and are often strategic. Because their style can dominate the bargaining process, competitive negotiators often neglect the importance of relationships.
5. **Compromising**: Individuals who are eager to close the deal by doing what is fair and equal for all parties involved in the negotiation. Compromisers can be useful when there is limited time to complete the deal; however, compromisers often unnecessarily rush the negotiation process and make concessions too quickly.

Emotion in negotiation

Emotions play an important part in the negotiation process, although it is only in recent years that their effect is being studied. Emotions have the potential to play either a positive or negative role in negotiation. During negotiations, the decision as to whether or not to settle, rests in part on emotional factors. Negative emotions can cause intense and even irrational behavior, and can cause conflicts to escalate and negotiations to break down, while positive emotions facilitate reaching an agreement and help to maximize joint gains.

Affect effect: Dispositional affects affect the various stages of the negotiation process: which strategies are planned to be used, which strategies are actually chosen, the way the other party and its intentions are perceived, the willingness to reach an agreement and the final outcomes.Positive affectivity (PA) and negative affectivity (NA) of one or more of the negotiating sides can lead to very different outcomes.

Positive effect in negotiation

Even before the negotiation process starts, people in a positive mood have more confidence, and higher tendencies to plan to use a cooperative strategy. During the negotiation, negotiators who are in a positive mood tend to enjoy the interaction more, show less contentious behavior, use less aggressive tacticsand more cooperative strategies.[This in turn increases the likelihood that parties will reach their instrumental goals, and enhance the ability to find integrative gains.Indeed, compared with negotiators with negative or natural affectivity, negotiators with positive affectivity reached more agreements and tended to honor those agreements more. Those favorable outcomes are due to better decision making processes, such as flexible thinking, creative problem solving, respect for others' perspectives, willingness to take risks and higher confidencePost negotiation positive affect

has beneficial consequences as well. It increases satisfaction with achieved outcome and influences one's desire for future interactions. The PA aroused by reaching an agreement facilitates the dyadic relationship, which result in affective commitment that sets the stage for subsequent interactions.[
PA also has its drawbacks: it distorts perception of self performance, such that performance is judged to be relatively better than it actually is.] Thus, studies involving self reports on achieved outcomes might be biased.

Negative effect in negotiation

Negative effect has detrimental effects on various stages in the negotiation process. Although various negative emotions affect negotiation outcomes, by far the most researched is anger. Angry negotiators plan to use more competitive strategies and to cooperate less, even before the negotiation starts. These competitive strategies are related to reduced joint outcomes. During negotiations, anger disrupts the process by reducing the level of trust, clouding parties' judgment, narrowing parties' focus of attention and changing their central goal from reaching agreement to retaliating against the other side. Angry negotiators pay less attention to opponent's interests and are less accurate in judging their interests, thus achieve lower joint gains. Moreover, because anger makes negotiators more self-centered in their preferences, it increases the likelihood that they will reject profitable offers. Anger doesn't help in achieving negotiation goals either: it reduces joint gains and does not help to boost personal gains, as angry negotiators don't succeed in claiming more for themselves. Moreover, negative emotions lead to acceptance of settlements that are not in the positive utility function but rather have a negative utility. However, expression of negative emotions during negotiation can sometimes be beneficial: legitimately expressed anger can be an effective way to show one's commitment, sincerity, and needs. Moreover, although NA reduces gains in integrative tasks, it is a better strategy than PA in distributive tasks (such as zero-sum). In his work on negative affect arousal and white noise, Seidner found support for the existence of a negative affect arousal mechanism through observations regarding the devaluation of speakers from other ethnic origins." Negotiation may be negatively affected, in turn, by submerged hostility toward an ethnic or gender group.

Conditions for emotions effect in negotiation

Research indicates that negotiator's emotions do not necessarily affect the negotiation process. Albarracın et al. (2003) suggested that there are two conditions for emotional effect, both related to the ability (presence of environmental or cognitive disturbances) and the motivation:

1. Identification of the affect: requires high motivation, high ability or both.
2. Determination that the affect is relevant and important for the judgment: requires that either the motivation, the ability or both are low.

According to this model, emotions are expected to affect negotiations only when one is high and the other is low. When both ability and motivation are low the affect will not be identified, and when both are high the affect will be identify but discounted as irrelevant for judgment. A possible implication of this model is, for example, that the positive effects PA has on negotiations (as described above) will be seen only when either motivation or ability are low.

The effect of the partner's emotions

Most studies on emotion in negotiations focus on the effect of the negotiator's own emotions on the process. However, what the other party feels might be just as important, as group emotions are known to affect processes both at the group and the personal levels. When it comes to negotiations, trust in the other party is a necessary condition for its emotion to affect and visibility enhances the effect. Emotions contribute to negotiation processes by signaling what one feels and thinks and can thus prevent the other party from engaging in destructive behaviors and to indicate what steps should be taken next: PA signals to keep in the same way, while NA points that mental or behavioral adjustments are needed. Partner's emotions can have two basic effects on negotiator's emotions and behavior: mimetic/ reciprocal or complementary. For example, disappointment or sadness might lead to compassion and more cooperation. In a study by Butt et al. (2005) which simulated real multi-phase negotiation, most people reacted to the partner's emotions in reciprocal, rather than complementary, manner. Specific emotions were found to have different effects on the opponent's feelings and strategies chosen:

- **Anger** caused the opponents to place lower demands and to concede more in a zero-sum negotiation, but also to evaluate the negotiation less favorably. It provoked both dominating and yielding behaviors of the opponent.
- **Pride** led to more integrative and compromise strategies by the partner.
- **Guilt** or **regret** expressed by the negotiator led to better impression of him by the opponent, however it also led the opponent to place higher demands. On the other hand, personal guilt was related to more satisfaction with what one achieved.
- **Worry** or **disappointment** left bad impression on the opponent, but led to relatively lower demands by the opponent. **Problems with lab negotiation studies**

Negotiation is a rather complex interaction. Capturing all its complexity is a very difficult task, let alone isolating and controlling only certain aspects of it. For this reason most negotiation studies are done under laboratory conditions, and focus only on some aspects. Although lab studies have their advantages, they do have major drawbacks when studying emotions:

- Emotions in lab studies are usually manipulated and are therefore relatively 'cold' (not intense). Although those 'cold' emotions might be enough to show effects, they are qualitatively different from the 'hot' emotions often experienced during negotiations.
- In real life there is self-selection to which negotiation one gets into, which effects the emotional commitment, motivation and interests. However this is not the case in lab studies
- Lab studies tend to focus on relatively few well defined emotions. Real life scenarios provoke a much wider scale of emotions.
- Coding the emotions has a double catch: if done by a third side, some emotions might not be detected as the negotiator sublimates them for strategic reasons. Self report measures might overcome this, but they are usually filled only before or after the process, and if filled during the process might interfere with it.
- **The pervasive impact of culture on international negotiations**

The primary purpose of this section is to demonstrate the extent of cultural differences in negotiation styles and how these differences can cause problems in international business negotiations. The reader will note that national culture does not determine negotiation behavior. Rather, national culture is one of many factors that influence behavior at the negotiation table, albeit an important one. For example, gender, organizational culture, international experience, industry or regional background can all be important influences as

well. Of course, stereotypes of all kinds are dangerous, and international negotiators must get to know the people they are working with, not just their culture, country, or company.

The material here is based on systematic study of international negotiation behavior over the last three decades in which the negotiation styles of more than 1,500 businesspeople in 17 countries (21 cultures) were considered. The work involved interviews with experienced executives and participant observations in the field, as well as behavioral science laboratory work including surveys and analyses of videotaped negotiations. The countries studied were Japan, S. Korea, China (Tianjin, Guangzhou, and Hong Kong), Vietnam, Taiwan, the Philippines, Russia, Israel, Norway, the Czech Republic, Germany, France, the United Kingdom, Spain, Brazil, Mexico, Canada (English-speakers and French-speakers), and the United States. The countries were chosen because they constitute America's most important present and future trading partners. Looking broadly across the several cultures, two important lessons stand out. The first is that regional generalizations very often are not correct. For example, Japanese and Korean negotiation styles are quite similar in some ways, but in other ways they could not be more different. The second lesson learned from the research is that Japan is an exceptional place: On almost every dimension of negotiation style considered, the Japanese are on or near the end of the scale. For example, the Japanese use the lowest amount of eye contact of the cultures studied. Sometimes, Americans are on the other end. But actually, most of the time Americans are somewhere in the middle. The reader will see this evinced in the data presented in this section. The Japanese approach, however, is most distinct, even *sui generis*.

Cultural differences cause four kinds of problems in international business negotiations, at the levels of:

- Language
- Nonverbal behaviors
- Values
- Thinking and decision-making processes

The order is important; the problems lower on the list are more serious because they are more subtle. For example, two negotiators would notice immediately if one were speaking Japanese and the other German. The solution to the problem may be as simple as hiring an interpreter or talking in a common third language, or it may be as difficult as learning a language. Regardless of the solution, the problem is obvious.

Cultural differences in nonverbal behaviors, on the other hand, are almost always hidden below our awareness. That is to say, in a face-to-face negotiation participants nonverbally—and more subtly—give off and take in a great deal of information. Some experts argue that this information is more important than verbal information. Almost all this signaling goes on below our levels of consciousness. When the nonverbal signals from foreign partners are different, negotiators are most apt to misinterpret them without even being conscious of the mistake. For example, when a French client consistently interrupts, Americans tend to feel uncomfortable without noticing exactly why. In this manner, interpersonal friction often colors business relationships, goes undetected, and, consequently, goes uncorrected. Differences in values and thinking and decision-making processes are hidden even deeper and therefore are even harder to diagnose and therefore cure. These differences are discussed below, starting with language and nonverbal behaviors.

Differences at the level of language

Translation problems are often substantial in international negotiations. And, when languages are linguistically distant,[29] greater problems should be anticipated. Particularly daunting can be work in global negotiation. Often the language used is English, but it may be spoken as a second language by most executives at the table. Indeed, native speakers from England, India, and the United States often have trouble understanding one another. Exact translations in international interactions are a goal almost never attained.

Moreover, language differences are sometimes exploited in interesting ways. Many senior executives in foreign countries speak and understand some English, but prefer to speak in their “stronger” native language and use an interpreter. Thus, we've see a senior Russian negotiator asking questions in Russian. The interpreter then translated the question for his American counterpart. While the interpreter spoke, the American’s attention (gaze direction) was given to the interpreter. However, the Russian’s gaze direction was at the American. Therefore, the Russian could carefully and unobtrusively observe the American's facial expressions and nonverbal responses. Additionally, when the American spoke, the senior Russian had twice the response time. Because he understood English, he could formulate his responses during the translation process.

What’s this extra response time worth in a strategic conversation? What’s it worth to be carefully able to observe the nonverbal responses of your top-level counterpart in a high-stakes business negotiation? Simply stated, bilingualism is not a common characteristic for Americans, and therefore competitors with greater language skills are afforded a natural advantage in international commerce.

Additionally, a common complaint heard from American managers regards foreign clients and partners breaking into side conversations in their native languages. At best, it is seen as impolite, and quite often American negotiators are likely to attribute something sinister to the content of the foreign talk—“They’re plotting or telling secrets.” This is a frequent American mistake.

The usual purpose of such side conversations is to straighten out a translation problem. For instance, one Korean may lean over to another and ask, “What’d he say?” Or, the side conversation can regard a disagreement among the foreign team members. Both circumstances should be seen as positive signs by Americans—that is, getting translations straight enhances the efficiency of the interactions, and concessions often follow internal disagreements. But because most Americans speak only one language, neither circumstance is appreciated. By the way, people from other countries are advised to give Americans a brief explanation of the content of their first few side conversations to assuage the sinister attributions.

But, there are problems at the level of language beyond translations and interpreters. Data from simulated negotiations are informative. In the study, the verbal behaviors of negotiators in 15 of the cultures (six negotiators in each of the 15 groups) were videotaped. The numbers in the body of Exhibit 1 represent the percentages of statements that were classified into each category listed. That is, 7 percent of the statements made by Japanese negotiators were classified as promises, 4 percent as threats, 7 percent as recommendations, and so on. The verbal bargaining behaviors used by the negotiators during the simulations proved to be surprisingly similar across cultures. Negotiations in all 15 cultures were composed primarily of information-exchange tactics—questions and self-disclosures. Note that the Israelis are on the low end of the continuum of self-disclosures. Their 30 percent (near the Japanese, Spaniards, and the English-speaking Canadians at 34 percent) was the lowest across all 15 groups, suggesting that they are the most reticent about giving (that is,

communicating) information. Overall, however, the patterns of verbal tactics used were surprisingly similar across the diverse cultures.

Go to Exhibit 1, Verbal Negotiation Tactics, (the "what" of communications) across 15 Cultures

Nonverbal behaviors

Anthropologist Ray L. Birdwhistell demonstrated that less than 35% of the message in conversations is conveyed by the spoken word while the other 65% is communicated nonverbally. Albert Mehrabian, a UCLA psychologist, also parsed where meaning comes from in face-to-face interactions. He reports:

- 7% of the meaning is derived from the words spoken
- 38% from paralinguistic channels, that is, tone of voice, loudness, and other aspects of how things are said
- 55% from facial expressions

Of course, some might quibble with the exact percentages (and many have), but our work also supports the notion that nonverbal behaviors are crucial – how things are said is often more important than what is said.

Exhibit 2 provides analyses of some linguistic aspects and nonverbal behaviors for the 15 videotaped groups, that is, how things are said. Although these efforts merely scratch the surface of these kinds of behavioral analyses, they still provide indications of substantial cultural differences. Note that, once again, the Japanese are at or next to the end of the continuum on almost every dimension of the behaviors listed. Their facial gazing and touching are the least among the 15 groups. Only the Northern Chinese used the word no less frequently, and only the Russians used more silent periods than did the Japanese.

Go to Exhibit 2, Linguistic Aspects of Language and Nonverbal Behaviors ("how" things are said) across 15 Cultures: A broader examination of the data in Exhibits 1 and 2 reveals a more meaningful conclusion: The variation across cultures is greater when comparing linguistic aspects of language and nonverbal behaviors than when the verbal content of negotiations is considered. For example, notice the great differences between the Japanese and Brazilians in Exhibit 1 vis-à-vis Exhibit 2.

Distinctive negotiation behaviors of 15 cultural groups

Following are further descriptions of the distinctive aspects of each of the 15 cultural groups videotaped. Certainly, conclusions of statistical significant differences between individual cultures cannot be drawn without larger sample sizes. But, the suggested cultural differences are worthwhile to consider briefly.

Japan. Consistent with most descriptions of Japanese negotiation behavior, the results of this analysis suggest their style of interaction is among the least aggressive (or most polite). Threats, commands, and warnings appear to be de-emphasized in favor of the more positive promises, recommendations, and commitments. Particularly indicative of their polite conversational style was their infrequent use of *no* and *you* and facial gazing, as well as more frequent silent periods.

Korea. Perhaps one of the more interesting aspects of the analysis is the contrast of the Asian styles of negotiations. Non-Asians often generalize about the Orient; the findings demonstrate, however, that this is a mistake. Korean negotiators used considerably more punishments and commands than did the Japanese. Koreans used the word no and interrupted more than three times as frequently as the Japanese. Moreover, no silent periods occurred between Korean negotiators.

China (Northern). The behaviors of the negotiators from Northern China (i.e., in and around Tianjin) were most remarkable in the emphasis on asking questions (34 percent). Indeed, 70 percent of the statements made by the Chinese negotiators were classified as information-exchange tactics. Other aspects of their behavior were quite similar to the Japanese, particularly the use of *no* and *you* and silent periods.

Taiwan. The behavior of the businesspeople in Taiwan was quite different from that in China and Japan but similar to that in Korea. The Chinese on Taiwan were exceptional in the time of facial gazing—on the average, almost 20 of 30 minutes. They asked fewer questions and provided more information (self-disclosures) than did any of the other Asian groups.

Russia. The Russians' style was quite different from that of any other European group, and, indeed, was quite similar in many respects to the style of the Japanese. They used *no* and *you* infrequently and used the most silent periods of any group. Only the Japanese did less facial gazing, and only the Chinese asked a greater percentage of questions.

Israel. The behaviors of the Israeli negotiators were distinctive in three respects. As mentioned above, they used the lowest percentage of self-disclosures, apparently holding their cards relatively closely. Alternatively, they used by far the highest percentages of promises and recommendations, using these persuasive strategies unusually heavily. They were also at the end of the scale on the percentage of normative appeals at 5 percent with the most frequent reference to competitors' offers. Perhaps most importantly the Israeli negotiators interrupted one another much more frequently than negotiators from any other group. Indeed, this important nonverbal behavior is most likely to blame for the "pushy" stereotype often used by Americans to describe their Israeli negotiation partners.

Germany. The behaviors of the Germans are difficult to characterize because they fell toward the center of almost all the continua. However, the Germans were exceptional in the high percentage of self-disclosures (47 percent) and the low percentage of questions (11 percent).

United Kingdom. The behaviors of the British negotiators were remarkably similar to those of the Americans in all respects. Most British negotiators have a strong sense of the right way to negotiate and the wrong. Protocol is of great importance.

Spain. *Diga* is perhaps a good metaphor for the Spanish approach to negotiations evinced in our data. When you make a phone call in Madrid, the usual greeting on the other end is not *hola* ("hello") but is, instead, *diga* ("speak"). It is not surprising, then, that the Spaniards in the videotaped negotiations likewise used the highest percentage of commands (17 percent) of any of the groups and gave comparatively little information (self-disclosures, only 34 percent). Moreover, they interrupted one another more frequently than any other group, and they used the terms *no* and *you* very frequently.

France. The style of the French negotiators was perhaps the most aggressive of all the groups. In particular, they used the highest percentage of threats and warnings (together, 8 percent). They also used interruptions, facial gazing, and *no* and *you* very frequently compared with the other groups, and one of the French negotiators touched his partner on the arm during the simulation.

Brazil. The Brazilian businesspeople, like the French and Spanish, were quite aggressive. They used the second-highest percentage of commands of all the groups. On average, the Brazilians said the word *no* 42 times, *you* 90 times, and touched one another on the arm about 5 times during 30 minutes of negotiation. Facial gazing was also high.

Mexico. The patterns of Mexican behavior in our negotiations are good reminders of the dangers of regional or language-group generalizations. Both verbal and nonverbal behaviors were quite different than those of their Latin American (Brazilian) or continental (Spanish) cousins. Indeed, Mexicans answer the telephone with the much less demanding *bueno* (short for "good day"). In many respects, the Mexican behavior was very similar to that of the negotiators from the United States.

French-Speaking Canada. The French-speaking Canadians behaved quite similarly to their continental cousins. Like the negotiators from France, they too used high percentages of threats and warnings, and even more interruptions and eye contact. Such an aggressive interaction style would not mix well with some of the more low-key styles of some of the Asian groups or with English speakers, including English-speaking Canadians.

English-Speaking Canada. The Canadians who speak English as their first language used the lowest percentage of aggressive persuasive tactics (threats, warnings, and punishments totaled only 1 percent) of all 15 groups. Perhaps, as communications researchers suggest, such stylistic differences are the seeds of interethnic discord as witnessed in Canada over the years. With respect to international negotiations, the English-speaking Canadians used noticeably more interruptions and no's than negotiators from either of Canada's major trading partners, the United States and Japan.

United States. Like the Germans and the British, the Americans fell in the middle of most continua. They did interrupt one another less frequently than all the others, but that was their sole distinction.

These differences across the cultures are quite complex, and this material by itself should not be used to predict the behaviors of foreign counterparts. Instead, great care should be taken with respect to the aforementioned dangers of stereotypes. The key here is to be aware of these kinds of differences so that the Japanese silence, the Brazilian "no, no, no...," or the French threat are not misinterpreted.

Differences in managerial values as pertinent to negotiations

Four managerial values—objectivity, competitiveness, equality, and punctuality—that are held strongly and deeply by most Americans seem to frequently cause misunderstandings and bad feelings in international business negotiations.

Objectivity

“Americans make decisions based upon the bottom line and on cold, hard facts.” “Americans don’t play favorites.” “Economics and performance count, not people.” “Business is business.” Such statements well reflect American notions of the importance of objectivity.

The single most successful book on the topic of negotiation, *Getting to Yes*, is highly recommended for both American and foreign readers. The latter will learn not only about negotiations but, perhaps more important, about how Americans think about negotiations. The authors are quite emphatic about “separating the people from the problem,” and they state, “Every negotiator has two kinds of interests: in the substance and in the relationship.” This advice is probably quite worthwhile in the United States or perhaps in Germany, but in most places in the world such advice is nonsense. In most places in the world, particularly in collectivistic, high-context cultures, personalities and substance are not separate issues and cannot be made so.

For example, consider how important nepotism is in Chinese or Hispanic cultures. Experts tell us that businesses don’t grow beyond the bounds and bonds of tight family control in the burgeoning “Chinese commonwealth.” Things work the same way in Spain, Mexico, and the Philippines. And, naturally, negotiators from such countries not only will take things personally but will be personally affected by negotiation outcomes] What happens to them at the negotiation table will affect the business relationship regardless of the economics involved.

Competitiveness and Equality

Simulated negotiations can be viewed as a kind of experimental economics wherein the values of each participating cultural group are roughly reflected in the economic outcomes. The simple simulation used in this part of our work represents the essence of commercial negotiations—it has both competitive and cooperative aspects. At least 40 businesspeople from each culture played the same buyer-seller game, negotiating over the prices of three products. Depending on the agreement reached, the “negotiation pie” could be made larger through cooperation (as high as $10,400 in joint profits) before it was divided between the buyer and seller. The results are summarized in Exhibit 3Go to Exhibit 3, Cultural Differences in Competitiveness and Equality in Negotiation Outcomes across 20 Cultures:

The Japanese were the champions at making the pie big. Their joint profits in the simulation were the highest (at $9,590) among the 21 cultural groups involved. The Chinese in Hong Kong and the British businesspeople also behaved cooperatively in our negotiation game. The Czechs and the Germans behaved more competitively. The American pie was more average sized (at $9,030), but at least it was divided relatively equitably (51.8 percent of the profits went to the buyers). Conversely, the Japanese, and particularly the South Korean, Mexican businesspeople split their pies in strange (perhaps even unfair) ways, with buyers making higher percentages of the profits (53.8 percent, 55.0 percent, and 56.7 percent, respectively). The implications of these simulated business negotiations are completely consistent with the comments of other authors and the adage that in Japan (and apparently in Korea and Meixco as well) the buyer is “kinger”. Americans have little understanding of the Japanese practice of granting complete deference to the needs and wishes of buyers. That is not the way things work in America. American sellers tend to treat American buyers more as equals, and the egalitarian values of American society support this behavior. The American emphasis on competition and individualism represented in these findings is quite consistent with the work of Geert Hofstede,[35] which indicated that Americans scored the highest among all the cultural groups on the individualism (versus collectivism) scale. Moreover, values for individualism/collectivism have been shown to directly influence negotiation behaviors in several other countries.

Finally, not only do Japanese buyers achieve higher results than American buyers, but compared with American sellers ($4,350), Japanese sellers also get more of the commercial pie ($4,430) as well. Interestingly, when shown these results, Americans in executive seminars still often prefer the American seller's role. In other words, even though the American sellers make lower profits than the Japanese, many American managers apparently prefer lower profits if those profits are yielded from a more equal split of the joint profits.

Time

"Just make them wait." Everyone else in the world knows that no negotiation tactic is more useful with Americans, because no one places more value on time, no one has less patience when things slow down, and no one looks at their wristwatches more than Americans do. Edward T. Hall in his seminal writing[is best at explaining how the passage of time is viewed differently across cultures and how these differences most often hurt Americans.

Even Americans try to manipulate time to their advantage, however. As a case in point, Solar Turbines Incorporated (a division of Caterpillar) once sold $34 million worth of industrial gas turbines and compressors for a Russian natural gas pipeline project. Both parties agreed that final negotiations would be held in a neutral location, the south of France. In previous negotiations, the Russians had been tough but reasonable. But in Nice, the Russians were not nice. They became tougher and, in fact, completely unreasonable, according to the Solar executives involved.

It took a couple of discouraging days before the Americans diagnosed the problem, but once they did, a crucial call was made back to headquarters in San Diego. Why had the Russians turned so cold? They were enjoying the warm weather in Nice and weren't interested in making a quick deal and heading back to Moscow! The call to California was the key event in this negotiation. Solar's headquarters people in San Diego were sophisticated enough to allow their negotiators to take their time. From that point on, the routine of the negotiations changed to brief, 45-minute meetings in the mornings, with afternoons at the golf course, beach, or hotel, making calls and doing paperwork. Finally, during the fourth week, the Russians began to make concessions and to ask for longer meetings. Why? They could not go back to Moscow after four weeks on the Mediterranean without a signed contract. This strategic reversal of the time pressure yielded a wonderful contract for Solar.

Differences in thinking and decision-making processes

When faced with a complex negotiation task, most Westerners (notice the generalization here) divide the large task up into a series of smaller tasks. Issues such as prices, delivery, warranty, and service contracts may be settled one issue at a time, with the final agreement being the sum of the sequence of smaller agreements. In Asia, however, a different approach is more often taken wherein all the issues are discussed at once, in no apparent order, and concessions are made on all issues at the end of the discussion. The Western sequential approach and the Eastern holistic approach do not mix well.

That is, American managers often report great difficulties in measuring progress in negotiations, particularly in Asian countries. After all, in America, you are half done when half the issues are settled. But in China, Japan, or Korea nothing seems to get settled. Then, surprise, you are done. Often, Americans make unnecessary concessions right before agreements are announced by the other side. For example, one American department store executive traveling to Japan to buy six different consumer products for her chain lamented that negotiations for the first product took an entire week. In the United States, such a

purchase would be consummated in an afternoon. So, by her calculations, she expected to have to spend six weeks in Japan to complete her purchases. She considered raising her purchase prices to try to move things along faster. But before she was able to make such a concession, the Japanese quickly agreed on the other five products in just three days. This particular manager was, by her own admission, lucky in her first encounter with Japanese bargainer

This American executive's near blunder reflects more than just a difference in decision-making style. To Americans, a business negotiation is a problem-solving activity, the best deal for both parties being the solution. To a Japanese businessperson, on the other hand, a business negotiation is a time to develop a business relationship with the goal of long-term mutual benefit. The economic issues are the context, not the content, of the talks. Thus, settling any one issue really is not that important. Such details will take care of themselves once a viable, harmonious business relationship is established. And, as happened in the case of the retail goods buyer above, once the relationship was established—signaled by the first agreement—the other "details" were settled quickly.

American bargainers should anticipate such a holistic approach to be common in Asian cultures and be prepared to discuss all issues simultaneously and in an apparently haphazard order. Progress in the talks should not be measured by how many issues have been settled. Rather, Americans must try to gauge the quality of the business relationship. Important signals of progress can be the following:

1. Higher-level executives from the other side being included in the discussions
2. Their questions beginning to focus on specific areas of the deal
3. A softening of their attitudes and position on some of the issues—"Let us take some time to study this issue"
4. At the negotiation table, increased talk among themselves in their own language, which may often mean they're trying to decide something
5. Increased bargaining and use of the lower-level, informal, and other channels of communication

Implications for managers and negotiators

Considering all the potential problems in cross-cultural negotiations, particularly when you mix managers from relationship-oriented cultures with those from information-oriented ones, it is a wonder that any international business gets done at all. Obviously, the economic imperatives of global trade make much of it happen despite the potential pitfalls. But an appreciation of cultural differences can lead to even better international commercial transactions—it is not just business deals but creative and highly profitable business relationships that are the real goal of international business negotiations.

Decision making

Decision making can be regarded as an outcome of mental processes (cognitive process) leading to the selection of a course of action among several alternatives. Every decision making process produces a final choice.[1] The output can be an action or an opinion of choice.

Overview

Human performance in decision making terms has been the subject of active research from several perspectives. From a psychological perspective, it is necessary to examine individual decisions in the context of a set of needs, preferences an individual has and values they seek. From a cognitive perspective, the decision making process must be regarded as a continuous process integrated in the interaction with the environment. From a normative perspective, the analysis of individual decisions is concerned with the logic of decision making and rationality and the invariant choice it leads to. Yet, at another level, it might be regarded as a problem solving activity which is terminated when a satisfactory solution is found. Therefore, decision making is a reasoning or emotional process which can be rational or irrational, can be based on explicit assumptions or tacit assumptions.

Logical decision making is an important part of all science-based professions, where specialists apply their knowledge in a given area to making informed decisions. For example, medical decision making often involves making a diagnosis and selecting an appropriate treatment. Some research using naturalistic methods shows, however, that in situations with higher time pressure, higher stakes, or increased ambiguities, experts use intuitive decision making rather than structured approaches, following a recognition primed decision approach to fit a set of indicators into the expert's experience and immediately arrive at a satisfactory course of action without weighing alternatives. Recent robust decision efforts have formally integrated uncertainty into the decision making process. However, Decision Analysis, recognized and included uncertainties with a structured and rationally justifiable method of decision making since its conception in 1964.

Decision making processes

According to behavioralist Isabel Briggs Myers, a person's decision making process depends to a significant degree on their cognitive style. Myers developed a set of four bi-polar dimensions, called the Myers-Briggs Type Indicator (MBTI). The terminal points on these dimensions are: *thinking* and *feeling*; *extroversion* and *introversion*; *judgment* and *perception*; and *sensing* and *intuition*. She claimed that a person's decision making style correlates well with how they score on these four dimensions. For example, someone who scored near the thinking, extroversion, sensing, and judgment ends of the dimensions would tend to have a logical, analytical, objective, critical, and empirical decision making style.

Other studies suggest that these national or cross-cultural differences exist across entire societies. For example, Maris Martinsons has found that American, Japanese and Chinese business leaders each exhibit a distinctive national style of decision making. Some of the decision making techniques that we use in everyday life include:

- listing the advantages and disadvantages of each option, popularized by Plato and Benjamin Franklin
- flipping a coin, cutting a deck of playing cards, and other random or coincidence methods
- accepting the first option that seems like it might achieve the desired result
- prayer, tarot cards, astrology, augurs, revelation, or other forms of divination
- acquiesce to a person in authority or an "expert"
- choosing the alternative with the highest probability-weighted utility for each alternative (see Decision Analysis)

Cognitive and personal biases

Biases can creep into our decision making processes. Many different people have made a decision about the same question (*e.g.* "Should I have a doctor look at this troubling breast

cancer symptom I've discovered?" "Why did I ignore the evidence that the project was going over budget?") and then craft potential cognitive interventions aimed at improving decision making outcomes.

Below is a list of some of the more commonly debated cognitive biases.

- Selective search for evidence (a.k.a. Confirmation bias in psychology) (Scott Plous, 1993) – We tend to be willing to gather facts that support certain conclusions but disregard other facts that support different conclusions. Individuals who are highly defensive in this manner show significantly greater left prefrontal cortex activity as measured by EEG than do less defensive individuals.
- Premature termination of search for evidence – We tend to accept the first alternative that looks like it might work.
- Inertia – Unwillingness to change thought patterns that we have used in the past in the face of new circumstances.
- Selective perception – We actively screen-out information that we do not think is important. (See prejudice.) In one demonstration of this effect, discounting of arguments with which one disagrees (by judging them as untrue or irrelevant) was decreased by selective activation of right prefrontal cortex.
- Wishful thinking or optimism bias – We tend to want to see things in a positive light and this can distort our perception and thinking. Choice-supportive bias occurs when we distort our memories of chosen and rejected options to make the chosen options seem relatively more attractive.
- Recency – We tend to place more attention on more recent information and either ignore or forget more distant information. (See semantic priming.) The opposite effect in the first set of data or other information is termed Primacy effect (Plous, 1993).
- Repetition bias – A willingness to believe what we have been told most often and by the greatest number of different of sources.
- Anchoring and adjustment – Decisions are unduly influenced by initial information that shapes our view of subsequent information.
- Group think – Peer pressure to conform to the opinions held by the group.
- Source credibility bias – We reject something if we have a bias against the person, organization, or group to which the person belongs: We are inclined to accept a statement by someone we like. (See prejudice.)
- Incremental decision making and escalating commitment – We look at a decision as a small step in a process and this tends to perpetuate a series of similar decisions. This can be contrasted with **zero-based decision making**. (See slippery slope.)
- Attribution asymmetry – We tend to attribute our success to our abilities and talents, but we attribute our failures to bad luck and external factors. We attribute other's success to good luck, and their failures to their mistakes.
- Role fulfillment (Self Fulfilling Prophecy) – We conform to the decision making expectations that others have of someone in our position.
- Underestimating uncertainty and the illusion of control – We tend to underestimate future uncertainty because we tend to believe we have more control over events than we really do. We believe we have control to minimize potential problems in our decisions.

Neuroscience perspective

The anterior cingulate cortex (ACC), orbitofrontal cortex (and the overlapping ventromedial prefrontal cortex) are brain regions involved in decision making processes. A recent neuroimaging study,[8] found distinctive patterns of neural activation in these regions depending on whether decisions were made on the basis of personal volition or following

directions from someone else. Patients with damage to the ventromedial prefrontal cortex have difficulty making advantageous decisions

A recent study involving Rhesus monkeys found that neurons in the parietal cortex not only represent the formation of a decision but also signal the degree of certainty (or "confidence") associated with the decision. Another recent study found that lesions to the ACC in the macaque resulted in impaired decision making in the long run of reinforcement guided tasks suggesting that the ACC is responsible for evaluating past reinforcement information and guiding future action.

Emotion appears to aid the decision making process: Decision making often occurs in the face of uncertainty about whether one's choices will lead to benefit or harm (see also Risk). The somatic-marker hypothesis is a neurobiological theory of how decisions are made in the face of uncertain outcome. This theory holds that such decisions are aided by emotions, in the form of bodily states, that are elicited during the deliberation of future consequences and that mark different options for behavior as being advantageous or disadvantageous. This process involves an interplay between neural systems that elicit emotional/bodily states and neural systems that map these emotional/bodily states.

Styles and methods of decision making

Styles and methods of decision making were elaborated by the founder of Predispositioning Theory, Aron Katsenelinboigen. In his analysis on styles and methods Katsenelinboigen referred to the game of chess, saying that “chess does disclose various methods of operation, notably the creation of predisposition—methods which may be applicable to other, more complex systems. In his book Katsenelinboigen states that apart from the methods (reactive and selective) and sub-methods (randomization, predispositioning, programming), there are two major styles – positional and combinational. Both styles are utilized in the game of chess. According to Katsenelinboigen, the two styles reflect two basic approaches to the uncertainty: deterministic (combinational style) and indeterministic (positional style). Katsenelinboigen’s definition of the two styles are the following.

The combinational style is characterized by

- a very narrow, clearly defined, primarily material goal, and
- a program that links the initial position with the final outcome.

In defining the combinational style in chess, Katsenelinboigen writes:

The combinational style features a clearly formulated limited objective, namely the capture of material (the main constituent element of a chess position). The objective is implemented via a well defined and in some cases in a unique sequence of moves aimed at reaching the set goal. As a rule, this sequence leaves no options for the opponent. Finding a combinational objective allows the player to focus all his energies on efficient execution, that is, the player’s analysis may be limited to the pieces directly partaking in the combination. This approach is the crux of the combination and the combinational style of play. The positional style is distinguished by

- a positional goal and
- a formation of semi-complete linkages between the initial step and final outcome.

"Unlike the combinational player, the positional player is occupied, first and foremost, with the elaboration of the position that will allow him to develop in the unknown future. In playing the positional style, the player must evaluate relational and material parameters as independent variables. (...) The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. However, the combination is not the final goal of the positional player—it helps him to achieve the desirable, keeping in mind a predisposition for the future development. The Pyrrhic victory is the best example of one's inability to think positionally. The positional style serves to

a) create a predisposition to the future development of the position;
b) induce the environment in a certain way;
c) absorb an unexpected outcome in one's favor;
d) avoid the negative aspects of unexpected outcomes.

The positional style gives the player the opportunity to develop a position until it becomes pregnant with a combination. Katsenelinboigen writes:
"As the game progressed and defense became more sophisticated the combinational style of play declined. . . . The positional style of chess does not eliminate the combinational one with its attempt to see the entire program of action in advance. The positional style merely prepares the transformation to a combination when the latter becomes feasible.

Topic 3 Facilitation

The term **facilitation** is broadly used to describe any activity which makes tasks for others easy. For example:

- Facilitation is used in business and organisational settings to ensure the designing and running of successful meetings.
- Neural facilitation in neuroscience, is the increase in postsynaptic potential evoked by a 2nd impulse.
- Ecological facilitation describes how an organism profits from the presence of another. Examples are nurse plants, which provide shade for new seedlings or saplings (e.g. using an orange tree to provide shade for a newly planted coffee plant), or plants providing shelter from wind chill in arctic environments.

A person who takes on such a role is called a **facilitator**. Specifically:

- A facilitator is used in a variety of group settings, including business and other organisations to describe someone whose role it is to work with group processes to ensure meetings run well and achieve a high degree of consensus.
- The term **facilitator** is used in psychotherapy where the role is more to help group members become aware of the feelings they hold for one another (*see* Group psychotherapy)
- The term **facilitator** is used in education to refer to a specifically trained adult who sits in class with a disabled, or otherwise needy, student to help them follow the lesson that the teacher is giving (*see* Disability)
- The term **facilitator** is used to describe people engaged in the illegal trafficking of human beings across international borders (*see* Human trafficking).
- The term **facilitator** is used to describe those individuals who arrange adoptions by attempting to match available children with prospective adopters.

- The term **facilitator** is used to describe someone who assists people with communication disorders to use communication aids with their hands. See Facilitated communication

Topic 3 Arbitration

Arbitration, a form of alternative dispute resolution (ADR), is a legal technique for the resolution of disputes outside the courts, wherein the parties to a dispute refer it to one or more persons (the "arbitrators", "arbiters" or "arbitral tribunal"), by whose decision (the "award") they agree to be bound. It is a settlement technique in which a third party reviews the case and imposes a decision that is legally binding for both sides. Other forms of ADR include mediation (a form of settlement negotiation facilitated by a neutral third party) and non-binding resolution by experts. It is more helpful, however, simply to classify arbitration as a form of binding dispute resolution, equivalent to litigation in the courts, and entirely distinct from the other forms of dispute resolution, such as negotiation, mediation, or determinations by experts, which are usually non-binding. Arbitration is most commonly used for the resolution of commercial disputes, particularly in the context of international commercial transactions. The use of arbitration is far more controversial in consumer and employment matters, where arbitration is not voluntary but is instead imposed on consumers or employees through fine-print contracts, denying individuals of their right to access the courts.

Arbitration can be either voluntary or mandatory and can be either binding or non-binding. Non-binding arbitration is, on the surface, similar to mediation. However, the principal distinction is that whereas a mediator will try to help the parties find a middle ground on which to compromise, the (non-binding) arbitrator remains totally removed from the settlement process and will only give a determination of liability and, if appropriate, an indication of the quantum of damages payable.

History

It is not known exactly when formal non-judicial arbitration first began but it can be said with some certainty that arbitration, as a way of resolving disputes predates formal courts. Records from ancient Egypt attest to its use especially with high priests and their interaction with the public. Arbitration was popular both in ancient Greece and in Rome.

Under English law, the first law on arbitration was the Arbitration Act 1697, but when it was passed arbitration was already common. The first recorded judicial decision relating to arbitration was in England in 1610. The noted Elizabethan English legal scholar Sir Edward Coke refers to an earlier decision dating from the reign of Edward IV (which ended in 1483). Early arbitrations at common law suffered from the fatal weakness that either party to the dispute could withdraw the arbitrator's mandate right up until the delivery of the award if things appeared to be going against them (this was rectified in the 1697 Act).

The Jay Treaty of 1794 between Britain and the United States sent unresolved issues regarding debts and boundaries to arbitration, which took 7 years and proved successful.

In the first part of the twentieth century, many countries (France and the United States being good examples) began to pass laws sanctioning and even promoting the use of private adjudication as an alternative to what was perceived to be inefficient court systems.

The growth of international trade however, brought greater sophistication to a process that had previously been largely *ad hoc* in relation to disputes between merchants resolved under the auspices of the *lex mercatoria*. As trade grew, so did the practice of arbitration, eventually leading to the creation of a variant now known as international arbitration, as a means for resolving disputes under international commercial contracts.

Today, arbitration also occurs online, in what is commonly referred to as Online Dispute Resolution, or ODR. Typically, ODR proceedings occur following the filing of a claim online, with the proceedings taking place over the internet, and judgment rendered on the basis of documentation presented.

Nature

Arbitration is a proceeding in which a dispute is resolved by an impartial adjudicator whose decision the parties to the dispute have agreed will be final and binding. Arbitration is not the same as:

- judicial proceedings, although in some jurisdictions, court proceedings are sometimes referred as arbitrationsalternative dispute resolution (or ADR) expert determination
- mediation

Advantages and disadvantages

Parties often seek to resolve their disputes through arbitration because of a number of perceived potential advantages over judicial proceedings:

- when the subject matter of the dispute is highly technical, arbitrators with an appropriate degree of expertise can be appointed (as one cannot "choose the judge" in litigation)
- arbitration is often faster than litigation in court
- arbitration can be cheaper and more flexible for businesses
- arbitral proceedings and an arbitral award are generally non-public, and can be made confidential
- because of the provisions of the New York Convention 1958, arbitration awards are generally easier to enforce in other nations than court judgments
- in most legal systems, there are very limited avenues for appeal of an arbitral award

However, some of the disadvantages of arbitration can be that:

- arbitration agreements are sometimes contained in ancillary agreements, or in small print in other agreements, and consumers and employees sometimes do not know in advance that they have agreed to mandatory binding pre-dispute arbitration by purchasing a product or taking a job
- if the arbitration is mandatory and binding, the parties waive their rights to access the courts and have a judge or jury decide the case
- in some arbitration agreements, the parties are required to pay for the arbitrators, which adds an additional layer of legal cost that can be prohibitive, especially in small consumer disputes

- in some arbitration agreements and systems, the recovery of attorneys' fees is unavailable, making it difficult or impossible for consumers or employees to get legal representation; however most arbitration codes and agreements provide for the same relief that could be granted in court
- if the arbitrator or the arbitration forum depends on the corporation for repeat business, there may be an inherent incentive to rule against the consumer or employee
- there are very limited avenues for appeal, which means that an erroneous decision cannot be easily overturned
- although usually thought to be speedier, when there are multiple arbitrators on the panel, juggling their schedules for hearing dates in long cases can lead to delays
- in some legal systems, arbitral awards have fewer enforcement remedies than judgments; although in the United States, arbitration awards are enforced in the same manner as court judgments and have the same effect
- arbitrators are generally unable to enforce interlocutory measures against a party, making it easier for a party to take steps to avoid enforcement of an award, such as the relocation of assets offshore
- rule of applicable law is not necessarily binding on the arbitrators, although they cannot disregard the law.
- discovery may be more limited in arbitration
- the potential to generate billings by attorneys may be less than pursuing the dispute through trial
- unlike court judgments, arbitration awards themselves are not directly enforceable. A party seeking to enforce an arbitration award must resort to judicial remedies, called an action to "confirm" an award
- although grounds for attacking an arbitration award in court are limited, efforts to confirm the award can be fiercely fought, thus necessitating huge legal expenses that negate the perceived economic incentive to arbitrate the dispute in the first place.

Arbitrability

By their nature, the subject matter of some disputes is not capable of arbitration. In general, two groups of legal procedures cannot be subjected to arbitration:

- Procedures which necessarily lead to a determination which the parties to the dispute may not enter into an agreement upon: Some court procedures lead to judgments which bind all members of the general public, or public authorities in their capacity as such, or third parties, or which are being conducted in the public interest. *Examples*: Until relatively recently (80s), antitrust matters were not arbitrable in the United States. Matters relating to crimes, status and family law are generally not considered to be arbitrable, as the power of the parties to enter into an agreement upon these matters is at least restricted. However, most other disputes that involve private rights between two parties can be resolved using arbitration. In some disputes, parts of claims may be arbitrable and other parts not. For example, in a dispute over patent infringement, a determination of whether a patent has been infringed could be adjudicated upon by an arbitration tribunal, but the validity of a patent could not: As patents are subject to a system of public registration, an arbitral panel would have no power to order the relevant body to rectify any patent registration based upon its determination.
- Some legal orders exclude or restrict the possibility of arbitration for reasons of the protection of weaker members of the public, e.g. consumers. *Examples*: German law excludes disputes over the rental of living space from any form of arbitrationwhile arbitration agreements with consumers are only considered valid if they are signed by

either party, and if the signed document does not bear any other content than the arbitration agreement.

Arbitration agreement

In theory, arbitration is a consensual process; a party cannot be forced to arbitrate a dispute unless he agrees to do so. In practice, however, many fine-print arbitration agreements are inserted in situations in which consumers and employees have no bargaining power. Moreover, arbitration clauses are frequently placed within sealed users' manuals within products, within lengthy click-through agreements on websites, and in other contexts in which meaningful consent is not realistic. Such agreements are generally divided into two types:

- agreements which provide that, if a dispute should arise, it will be resolved by arbitration. These will generally be normal contracts, but they contain an arbitration clause
- agreements which are signed after a dispute has arisen, agreeing that the dispute should be resolved by arbitration (sometimes called a "submission agreement")

The former is the far more prevalent type of arbitration agreement. Sometimes, legal significance attaches to the type of arbitration agreement. For example, in certain Commonwealth countries, it is possible to provide that each party should bear their own costs in a conventional arbitration clause, but not in a submission agreement.

In keeping with the informality of the arbitration process, the law is generally keen to uphold the validity of arbitration clauses even when they lack the normal formal language associated with legal contracts. Clauses which have been upheld include:

- "arbitration in London - English law to apply"suitable arbitration clause"arbitration, if any, by ICC Rules in London"The courts have also upheld clauses which specify resolution of disputes other than in accordance with a specific legal system. These include provision indicating:

- that the arbitrators "must not necessarily judge according to the strict law but as a general rule ought chiefly to consider the principles of practical business""internationally accepted principles of law governing contractual relations"Agreements to refer disputes to arbitration generally have a special status in the eyes of the law. For example, in disputes on a contract, a common defence is to plead the contract is void and thus any claim based upon it fails. It follows that if a party successfully claims that a contract is void, then each clause contained within the contract, including the arbitration clause, would be void. However, in most countries, the courts have accepted that:

1. a contract can only be declared void by a court or other tribunal; and
2. if the contract (valid or otherwise) contains an arbitration clause, then the proper forum to determine whether the contract is void or not, is the arbitration tribunal. Arguably, either position is potentially unfair; if a person is made to sign a contract under duress, and the contract contains an arbitration clause highly favourable to the other party, the dispute may still referred to that arbitration tribunal. Conversely a court may be persuaded that the arbitration agreement itself is void having been signed under duress. However, most courts will be reluctant to interfere with the general rule which does allow for commercial expediency; any other solution (where

one first had to go to court to decide whether one had to go to arbitration) would be self defeating.

Applicable laws

Arbitration is subject to different laws. These may be summarized as follows:

- The law governing the arbitration agreement
- The law governing the arbitral tribunal and its proceedings (lex arbitri - procedural law)
- The law governing the substance of the dispute
- The law governing recognition and enforcement of the award

Severability and law governing the arbitration agreement

The arbitration agreement which is part of the main contract (often referred to as "container contract") is governed by the law which governs the main contract. An important feature of arbitration, however, is severability - the fact that arbitration agreement lives a life of its own and is autonomous of the main agreement. Invoking the invalidity of the main agreement may not necessarily bring with it the invalidity of the arbitration clause. Another feature closely tied to this is "competence-competence" - the ability of the arbitration tribunal to decide on its own jurisdiction. Therefore a party who is trying to avoid arbitration at an early stage by claiming that the main contract is invalid will face the arbitration agreement separate from the main one and the arbitrators deciding on their own competence.

Seat of the arbitration

Most legal systems recognise the concept of a "seat" of the arbitration, which is a geographical and legal jurisdiction to which the arbitration is tied. The seat will normally determine the procedural rules (*lex arbitri*) which the arbitration follows, and the courts which exercise jurisdiction over the seat will have a supervisory role over the conduct of the arbitration.

Parties to the arbitration are free to choose the seat of arbitration and often do so in practice. If they do not, the arbitral tribunal will do it for them. Whereas it is possible to detach procedural law from the seat of arbitration (e.g. seat in Switzerland, English procedural law) this creates confusion as it subjects the arbitration to two controlling and possibly conflicting laws. The procedural law of arbitration, normally determined by the seat, ought to be distinguished from the procedure that the arbitration panel will follow. The latter refers to daily operation of the arbitration and is normally determined either by the institution in question (if arbitration is institutional, e.g. ICC Rules) or by reference to a ready-made procedure (such as the UNCITRAL Rules).

The seat of arbitration might not be the same as the place where proceedings are actually happening. Thus, for instance, an ICC arbitration may have its seat in London (and therefore be governed by the English *lex arbitri* and ICC procedural rules) and most sessions may take place outside the UK.

Law applicable to procedure

The essential matters of procedure -- such as any disagreement over the appointment or replacement of arbitrators, the jurisdiction of the tribunal itself, or the validity of an

arbitration award -- are determined by the procedural law of the seat of the arbitration, and may be decided by recourse to courts. The parties normally influence this through their choice of the seat of arbitration or directly through choice of procedural law.

All other matters of procedure are generally determined by the arbitral tribunal itself (depending on national law and respect for due process) and the preferences of the arbitrators, the parties, and their counsel. The arbitrators' power to determine procedural matters normally includes:

- mode of submitting (and challenging) evidence
- time and place of any hearings
- language and translations
- disclosure of documents and other evidence
- use of pleadings and/or interrogatories
- the appointment of experts and assessors

Law applicable to substance

Parties in a commercial dispute will often choose the law applicable to the substance of their dispute. In fact, they are more likely to choose substantive than procedural law as this will have direct impact on the outcome of their dispute. This choice is usually expressed in the arbitration clause itself or at least in part of the contract where the clause is located.

If the parties do not choose the applicable law the arbitral tribunal will. This is normally interpreted as the ability of the tribunal to choose the choice-of-law rules which will, in turn, point to the applicable law. The arbitrators are not strictly speaking bound by public policy order or mandatory rules of third states but will normally observe them as that increases the chance of the award being recognized.

The tribunal may decide *ex aequo et bono* only if the parties have expressly authorized them to do so.

Law applicable to recognition and enforcement

The law that applies to issues of recognition will always be the law of the state where this recognition is sought. In a large number of states this will be governed by 1958 New York Convention which harmonizes the recognition and enforcement of foreign arbitral awards.

Sources of law

States regulate arbitration through a variety of laws. The main body of law applicable to arbitration is normally contained either in the national Private International Law Act (as is the case in Switzerland) or in a separate law on arbitration (as is the case in England). In addition to this, a number of national procedural laws may also contain provisions relating to arbitration.

By far the most important international instrument on arbitration law is the 1958 New York Convention on Recognition and Enforcement of Foreign Arbitral Awards. Some other relevant international instruments are:

- The Geneva Protocol of 1923
- The Geneva Convention of 1927

- The European Convention of 1961
- The Washington Convention of 1965 (governing settlement of international investment disputes)
- The UNCITRAL Model Law (providing a model for a national law of arbitration)
- The UNCITRAL Arbitration Rules (providing a set of rules for an ad hoc arbitration)

Arbitral tribunal

The term *arbitral tribunal* is used to denote the arbitrator or arbitrators sitting to determine the dispute. The composition of the arbitral tribunal can vary enormously, with either a sole arbitrator sitting, two or more arbitrators, with or without a chairman or umpire, and various other combinations.

In most jurisdictions, an arbitrator enjoys immunity from liability for anything done or omitted whilst acting as arbitrator unless the arbitrator acts in bad faith.

Arbitrations are usually divided into two types:

- *ad hoc* arbitrations and administered arbitrations.

In *ad hoc* arbitrations, the arbitral tribunals are appointed by the parties or by an appointing authority chosen by the parties. After the tribunal has been formed, the appointing authority will normally have no other role and the arbitation will be managed by the tribunal.

In administered arbitration, the arbitration will be administered by a professional arbitration institution providing arbitration services, such as the LCIA in London or the ICC in Paris. Normally the arbitration institution also will be the appointing authority.

Arbitration institutions tend to have their own rules and procedures, and may be more formal. They also tend to be more expensive, and, for procedural reasons, slower.

Duties of the tribunal

The duties of a tribunal will be determined by a combination of the provisions of the arbitration agreement and by the procedural laws which apply in the seat of the arbitration. The extent to which the laws of the seat of the arbitration permit "party autonomy" (the ability of the parties to set out their own procedures and regulations) determines the interplay between the two.

However, in almost all countries the tribunal owes several non-derogable duties. These will normally be:

- to act fairly and impartially between the parties, and to allow each party a reasonable opportunity to put their case and to deal with the case of their opponent (sometimes shortened to: complying with the rules of "natural justice"); and
- to adopt procedures suitable to the circumstances of the particular case, so as to provide a fair means for resolution of the dispute.

Arbitral awards

Although arbitration awards are characteristically an award of damages against a party, in many jurisdictions tribunals have a range of remedies that can form a part of the award. These may include:

1. payment of a sum of money (conventional damages)
2. the making of a "declaration" as to any matter to be determined in the proceedings
3. in some jurisdictions, the tribunal may have the same power as a court to:
    1. order a party to do or refrain from doing something ("injunctive relief")
    2. to order specific performance of a contract
    3. to order the rectification, setting aside or cancellation of a deed or other document.
4. In other jurisdictions, however, unless the parties have expressly granted the arbitrators the right to decide such matters, the tribunal's powers may be limited to deciding whether a party is entitled to damages. It may not have the legal authority to order injunctive relief, issue a declaration, or rectify a contract, such powers being reserved to the exclusive jurisdiction of the courts.

Enforcement of arbitration awards

One of the reasons that arbitration is so popular in international trade as a means of dispute resolution, is that it is often easier to enforce an arbitration award in a foreign country than it is to enforce a judgment of the court.

Under the New York Convention 1958, an award issued a contracting state can generally be freely enforced in any other contracting state, only subject to certain, limited defences.

Only foreign arbitration awards can be subject to recognition and enforcement pursuant to the New York Convention. An arbitral decision is foreign where the award was made in a state other than the state of recognition or where foreign procedural law was used.[21]

Virtually every significant commercial country in the world is a party to the Convention, but relatively few countries have a comprehensive network for cross-border enforcement of judgments of the court.

The other characteristic of cross-border enforcement of arbitration awards that makes them appealing to commercial parties is that they are not limited to awards of damages. Whereas in most countries only monetary judgments are enforceable in the cross-border context, no such restrictions are imposed on arbitration awards and so it is theoretically possible (although unusual in practice) to obtain an injunction or an order for specific performance in an arbitration proceeding which could then be enforced in another New York Convention contracting state.

The New York Convention is not actually the only treaty dealing with cross-border enforcement of arbitration awards. The earlier Geneva Convention on the Execution of Foreign Arbitral Awards 1927 remains in force, but the success of the New York Convention means that the Geneva Convention is rarely utilised in practise.

Arbitration with sovereign governments

Certain international conventions exist in relation to the enforcement of awards against states.

- The Washington Convention 1965 relates to settlement of investment disputes between states and citizens of other countries. The Convention created the International Centre for Settlement of Investment Disputes (or ICSID). Compared to other arbitration institutions, relatively few awards have been rendered under ICSID.
- The Algiers Declaration of 1981 established the Iran-US Claims Tribunal to adjudicate claims of American corporations and individuals in relation to expropriated property during the Islamic revolution in Iran in 1979. The tribunal has not been a notable success, and has even been held by an English court to be void under its own governing law.

Challenge

Generally speaking, by their nature, arbitration proceedings tend not to be subject to appeal, in the ordinary sense of the word.

However, in most countries, the court maintains a supervisory role to set aside awards in extreme cases, such as fraud or in the case of some serious legal irregularity on the part of the tribunal.

Only domestic arbitral awards (i.e. those where the seat of arbitration is located in the same state as the court seised) are subject to set aside procedure.

In American arbitration law there exists a small but significant body of case law which deals with the power of the courts to intervene where the decision of an arbitrator is in fundamental disaccord with the applicable principles of law or the contract. Unfortunately there is little agreement amongst the different American judgments and textbooks as to whether such a separate doctrine exists at all, or the circumstances in which it would apply. There does not appear to be any recorded judicial decision in which it has been applied. However, conceptually, to the extent it exists, the doctrine would be an important derogation from the general principle that awards are not subject to review by the courts.

Costs

In many legal systems - both common law and civil law - it is normal practice for the courts to award legal costs against a losing party, with the winner becoming entitled to recover an approximation of what it spent in pursuing its claim (or in defense of a claim). The United States is a notable exception to this rule, as except for certain extreme cases, a prevailing party in a US legal proceeding does not become entitled to recoup its legal fees from the losing party.

Like the courts, arbitral tribunals generally have the same power to award costs in relation to the determination of the dispute. In international arbitration as well as domestic arbitrations conducted in countries where courts may award costs against a losing party, the arbitral tribunal will also determine the portion of the arbitrators' fees that the losing party is required to bear.

Nomenclature

As methods of dispute resolution, arbitration procedure can be varied to suit the needs of the parties. Certain specific "types" of arbitration procedure have developed, particularly in North America.

- **Judicial Arbitration** is, usually, not arbitration at all, but merely a court process which refers to itself as arbitration, such as small claims arbitration before the County Courts in the United Kingdom.

- **High-Low Arbitration**, or **Bracketed Arbitration**, is an arbitration wherein the parties to the dispute agree in advance the limits within which the arbitral tribunal must render its award. It is only generally useful where liability is not in dispute, and the only issue between the party is the amount of compensation. If the award is lower than the agreed minimum, then the defendant only need pay the lower limit; if the award is higher than the agreed maximum, the claimant will receive the upper limit. If the award falls within the agreed range, then the parties are bound by the actual award amount. Practice varies as to whether the figures may or may not be revealed to the tribunal, or whether the tribunal is even advised of the parties' agreement.

- **Non-Binding Arbitration** is a process which is conducted as if it were a conventional arbitration, except that the award issued by the tribunal is not binding on the parties, and they retain their rights to bring a claim before the courts or other arbitration tribunal; the award is in the form of an independent assessment of the merits of the case, designated to facilitate an out-of-court settlement.

- **Pendulum Arbitration** refers to a determination in industrial disputes where an arbitrator has to resolve a claim between a trade union and management by making a determination of which of the two sides has the more reasonable position. The arbitrator must choose only between the two options, and cannot split the difference or select an alternative position. It was initiated in Chile in 1979 and has proved to be a very effective mechanism.

    - This form of arbitration is also known as **Baseball Arbitration**. It takes its name from a practice which arose in relation to salary arbitration in Major League Baseball.

    - **Night Baseball Arbitration** is a variation of baseball arbitration where the figures are not revealed to the arbitration tribunal. The arbitrator will determinate the quantum of the claim in the usual way, and the parties agree to accept and be bound by the figure which is closest to the tribunal's award.

Topic 4

Alternative dispute resolution

Alternative dispute resolution or external Dispute Resolution in some countries, such as Australia includes dispute resolution processes and techniques that fall outside of the government judicial process. Despite historic resistance to ADR by both parties and their advocates, ADR has gained widespread acceptance among both the general public and the legal profession in recent years. In fact, some courts now require some parties to resort to ADR of some type, usually mediation, before permitting the parties' cases to be tried. The rising popularity of ADR can be explained by the increasing caseload of traditional courts, the perception that ADR imposes fewer costs than litigation, a preference for confidentiality, and the desire of some parties to have greater control over the selection of the individual or individuals who will decide their dispute.

Alternative dispute resolution (**ADR**) tends to transform into **Appropriate dispute resolution**. ("Alternative ways of solving conflicts (ADR)", Zeno Sustac & Claudiu Ignat, 2008).

Types and features of alternative dispute resolution

ADR is generally classified into at least four types: negotiation, mediation, collaborative law, and arbitration. (Sometimes a fifth type, conciliation, is included as well, but for present purposes it can be regarded as a form of mediation. See conciliation for further details.) ADR can be used alongside existing legal systems such as Sharia Courts within Common Law jurisdictions such as the UK.

ADR traditions vary somewhat by country and culture. There are significant common elements which justify a main topic, and each country or region's difference should be delegated to sub-pages.

ADR or Alternative Dispute Resolution is of two historic types. First, methods for resolving disputes outside of the official judicial mechanisms. Second, informal methods attached to or pendant to official judicial mechanisms. There are in addition free-standing and or independent methods, such as mediation programs and ombuds offices within organizations. The methods are similar, whether or not they are pendant, and generally use similar tool or skill sets, which are basically sub-sets of the skills of negotiation.

ADR includes informal tribunals, informal mediative processes, formal tribunals and formal mediative processes. The classic formal tribunal forms of ADR are arbitration (both binding and advisory or non-binding) and private judges (either sitting alone, on panels or over summary jury trials). The classic formal mediative process is referral for mediation before a court appointed mediator or mediation panel. Structured transformative mediation as used by the U.S. Postal Service is a formal process. Classic informal methods include social processes, referrals to non-formal authorities (such as a respected member of a trade or social group) and intercession. The major differences between formal and informal processes are (a) pendency to a court procedure and (b) the possession or lack of a formal structure for the application of the procedure.

For example, freeform negotiation is merely the use of the tools without any process. Negotiation within a labor arbitration setting is the use of the tools within a highly formalized and controlled setting.

Calling upon an organizational ombudsman's office is never a formal procedure. (Calling upon an organizational ombudsman is always voluntary; by the International Ombudsman Association Standards of practice, no one can be compelled to use an ombuds office.)

Informal referral to a co-worker known to help people work out issues is an informal procedure. Co-worker interventions are usually informal.

Conceptualizing ADR in this way makes it easy to avoid confusing tools and methods (does negotiation once a law suit is filed cease to be ADR? If it is a tool, then the question is the wrong question) (is mediation ADR unless a court orders it? If you look at court orders and similar things as formalism, then the answer is clear: court annexed mediation is merely a formal ADR process).

Dividing lines in ADR processes are often provider driven rather than consumer driven. Educated consumers will often choose to use many different options depending on the needs and circumstances that they face.

Finally, it is important to realize that conflict resolution is one major goal of all the ADR processes. If a process leads to resolution, it is a dispute resolution process. The salient features of each type are as follows:

1. In negotiation, participation is voluntary and there is no third party who facilitates the resolution process or imposes a resolution. (NB – a third party like a chaplain or organizational ombudsperson or social worker or a skilled friend may be coaching one or both of the parties behind the scene, a process called "Helping People Help Themselves" – see Helping People Help Themselves, in Negotiation Journal July 1990, pp. 239–248, which includes a section on helping someone draft a letter to someone who is perceived to have wronged them.)
2. In mediation, there is a third party, a mediator, who facilitates the resolution process (and may even suggest a resolution, typically known as a "mediator's proposal"), but does *not* impose a resolution on the parties. In some countries (for example, the United Kingdom), ADR is synonymous with what is generally referred to as mediation in other countries.
3. In collaborative law or collaborative divorce, each party has an attorney who facilitates the resolution process within specifically contracted terms. The parties reach agreement with support of the attorneys (who are trained in the process) and mutually-agreed experts. No one imposes a resolution on the parties. However, the process is a formalized process that is part of the litigation and court system. Rather than being an Alternative Resolution methodology it is a litigation variant that happens to rely on ADR like attitudes and processes.
4. In arbitration, participation is typically voluntary, and there is a third party who, as a private judge, imposes a resolution. Arbitrations often occur because parties to contracts agree that any future dispute concerning the agreement will be resolved by arbitration. This is known as a 'Scott Avery Clause'. In recent years, the enforceability of arbitration clauses, particularly in the context of consumer agreements (e.g., credit card agreements), has drawn scrutiny from courts. Although parties may appeal arbitration outcomes to courts, such appeals face an exacting standard of review.

Beyond the basic types of alternative dispute resolutions there are other different forms of ADR:

- Case evaluation: a non-binding process in which parties present the facts and the issues to a neutral case evaluator who advises the parties on the strengths and weaknesses of their respective positions, and assesses how the dispute is likely to be decided by a jury or other adjudicator.

- Early neutral evaluation: a process that takes place soon after a case has been filed in court. The case is referred to an expert who is asked to provide a balanced and neutral evaluation of the dispute. The evaluation of the expert can assist the parties in assessing their case and may influence them towards a settlement.

- Family group conference: a meeting between members of a family and members of their extended related group. At this meeting (or often a series of meetings) the family becomes involved in learning skills for interaction and in making a plan to stop the abuse or other ill-treatment between its members.

- Neutral fact-finding: a process where a neutral third party, selected either by the disputing parties or by the court, investigates an issue and reports or testifies in court. The neutral fact-finding process is particularly useful for resolving complex scientific and factual disputes.

- Ombuds: third party selected by an institution – for example a university, hospital, corporation or government agency – to deal with complaints by employees, clients or constituents. The Standards of Practice for Organizational Ombuds may be found at http://www.ombudsassociation.org/standards/.

An organizational ombudsman works within the institution to look into complaints independently and impartially

"Alternative" dispute resolution is usually considered to be alternative to litigation. It also can be used as a colloquialism for allowing a dispute to drop or as an alternative to violence.

In recent years there has been more discussion about taking a systems approach in order to offer different kinds of options to people who are in conflict, and to foster "**appropriate**" dispute resolution. (See Lynch, J. "ADR and Beyond: A Systems Approach to Conflict Management", Negotiation Journal, Volume 17, Number 3, July 2001, Volume, p. 213.)

That is, some cases and some complaints in fact ought to go to formal grievance or to court or to the police or to a compliance officer or to a government IG. Other conflicts could be settled by the parties if they had enough support and coaching, and yet other cases need mediation or arbitration. Thus "alternative" dispute resolution usually means a method that is not the courts. "Appropriate" dispute resolution considers **all** the possible responsible options for conflict resolution that are relevant for a given issue. Arbitration and mediation are the best known and most commonly used forms of ADR within the UK. However in recent years adjudication is rapidly gaining attention as a quick, fair and cheap was to settle disputes.

ADR can increasingly be conducted online, which is known as online dispute resolution (ODR, which is mostly a buzzword and an attempt to create a distinctive product). It should be noted, however, that ODR services can be provided by government entities, and as such may form part of the litigation process. Moreover, they can be provided on a global scale, where no effective domestic remedies are available to disputing parties, as in the case of the UDRP and domain name disputes. In this respect, ODR might not satisfy the "alternative" element of ADR.

Country-specific examples

China

Chinese trained mediators have a long history and were practicing in court annexed mediations in the United States more than thirty years ago.

Modern era

Traditional people's mediation has always involved the parties remaining in contact for most or all of the mediation session. The innovation of separating the parties after (or sometimes before) a joint session and conducting the rest of the process without the parties in the same area was a major innovation and one that dramatically improved mediation's success rate.

Traditional arbitration involved heads of trade guilds or other dominant authorities settling disputes. The modern innovation was to have commercial vendors of arbitrators, often ones with little or no social or political dominance over the parties. The advantage was that such persons are much more readily available. The disadvantage is that it does not involve the community of the parties. When wool contract arbitration was conducted by senior guild officials, the arbitrator combined a seasoned expert on the subject matter with a socially dominant individual whose patronage, good will and opinion were important.

Private judges and summary jury trials are cost and time savings processes that have had limited penetration due to the alternatives becoming more robust and accepted.

Iceland

The Saga of Burnt Njal is the story of a mediator who was so successful that he eventually threatened the local power structure. It ends in tragedy with the unlawful burning of Njal alive in his home, the escape of a friend of the family, a mini-war and the eventual ending of the dispute by the intermarriage of the two strongest survivors. It illustrates that mediation was a powerful process in Iceland before the era of kings.

Roman Empire

Latin has a number of terms for mediator that predate the Roman Empire. Any time there are formal adjudicative processes it appears that there are informal ones as well. It is probably fruitless to attempt to determine which group had mediation first.

India

Alternative dispute resolution in India is not new and it was in existence even under the previous Arbitration Act, 1940. The Arbitration and Conciliation Act, 1996 has been enacted to accommodate the harmonisation mandates of UNCITRAL Model. To streamline the Indian legal system the traditional civil law known as Code of Civil Procedure, (CPC) 1908 has also been amended and section 89 has been introduced. Section 89 (1) of CPC provides an option for the settlement of disputes outside the court. It provides that where it appears to the court that there exist elements, which may be acceptable to the parties, the court may formulate the terms of a possible settlement and refer the same for arbitration, conciliation, mediation or judicial settlement.

Due to extremely slow judicial process, there has been a big thrust on Alternate Dispute Resolution mechanisms in India. While Arbitration and Conciliation Act, 1996 is a fairly standard western approach towards ADR, the Lok Adalat system constituted under National Legal Services Authority Act, 1987 is a uniquely Indian approach.

Arbitration and Conciliation Act, 1996

Part I of this act formalizes the process of Arbitration and Part III formalizes the process of Conciliation. (Part II is about Enforcement of Foreign Awards under New York and Geneva Conventions.)

Arbitration

The process of arbitration can start only if there exists a valid Arbitration Agreement between the parties prior to the emergence of the dispute. As per Section 7, such an

agreement must be in writing. The contract regarding which the dispute exists, must either contain an arbitration clause or must refer to a separate document signed by the parties containing the arbitration agreement. The existence of an arbitration agreement can also be inferred by written correspondence such as letters, talex, or telegrams which provide a record of the agreement. An exchange of statement of claim and defence in which existence of an arbitration agreement is alleged by one party and not denied by other is also considered as valid written arbitration agreement.

Any party to the dispute can start the process of appointing arbitrator and if the other party does not cooperate, the party can approach the office of Chief Justice for appointment of an arbitrator. There are only two grounds upon which a party can challenge the appointment of an arbitrator – reasonable doubt in the impartiality of the arbitrator and the lack of proper qualification of the arbitrator as required by the arbitration agreement. A sole arbitrator or a panel of arbitrators so appointed constitute the Arbitration Tribunal.

Except for some interim measures, there is very little scope for judicial intervention in the arbitration process. The arbitration tribunal has jurisdiction over its own jurisdiction. Thus, if a party wants to challenge the jurisdiction of the arbitration tribunal, it can do so only before the tribunal itself. If the tribunal rejects the request, there is little the party can do accept to approach a court after the tribunal makes an award. Section 34 provides certain grounds upon which a party can appeal to the principal civil court of original jurisdiction for setting aside the award.

Once the period for filing an appeal for setting aside an award is over, or if such an appeal is rejected, the award is binding on the parties and is considered as a decree of the court.

Conciliation

Conciliation is a less formal form of arbitration. This process does not require an existence of any prior agreement. Any party can request the other party to appoint a conciliator. One conciliator is preferred but two or three are also allowed. In case of multiple conciliators, all must act jointly. If a party rejects an offer to conciliate, there can be no conciliation.

Parties may submit statements to the conciliator describing the general nature of the dispute and the points at issue. Each party sends a copy of the statement to the other. The conciliator may request further details, may ask to meet the parties, or communicate with the parties orally or in writing. Parties may even submit suggestions for the settlement of the dispute to the conciliator.

When it appears to the conciliator that elements of settlement exist, he may draw up the terms of settlement and send it to the parties for their acceptance. If both the parties sign the settlement document, it shall be final and binding on both.

Note that in USA, this process is similar to Mediation. However, in India, Mediation is different from Conciliation and is a completely informal type of ADR mechanism.

Lok Adalat

It roughly means "People's court". India has had a long history of resolving disputes through the mediation of village elders. The system of Lok Adalats is an improvement on that and is based on Gandhian principles. This is a non-adversarial system, where by mock courts (called Lok Adalats) are held by the State Authority, District Authority, Supreme Court Legal

Services Committee, High Court Legal Services Committee, or Taluk Legal Services Committee, periodically for exercising such jurisdiction as they thinks fit. These are usually presided by retired judge, social activists, or members of legal profession. It does not have jurisdiction on matters related to non-compoundable offences.

There is no court fee and no rigid procedural requirement (i.e. no need to follow process given by Civil Procedure Code or Evidence Act), which makes the process very fast. Parties can directly interact with the judge, which is not possible in regular courts.

Cases that are pending in regular courts can be transferred to a Lok Adalat if both the parties agree. A case can also be transferred to a Lok Adalat if one party applies to the court and the court sees some chance of settlement after giving an opportunity of being heard to the other party.

The focus in Lok Adalats is on compromise. When no compromise is reached, the matter goes back to the court. However, if a compromise is reached, an award is made and is binding on the parties. It is enforced as a decree of a civil court. An important aspect is that the award is final and cannot be appealed, not even under Article 226 because it is a judgement by consent.

All proceedings of a Lok Adalat are deemed to be judicial proceedings and every Lok Adalat is deemed to be a Civil Court.

Permanent Lok Adalat for Public Utility Services

In order to get over the major drawback in the existing scheme of organisation of Lok Adalats under Chapter VI of the Legal Services Authorities Act, 1987, in which if the parties do not arrive at any compromise or settlement, the unsettled case is either returned back to the Court of law or the parties are advised to seek remedy in a court of law, which causes unnecessary delay in dispensation of justice, Chapter VI A was introduced in the Legal Services Authorities Act, 1987, by Act No.37/2002 with effect from 11-06-2002 providing for a Permanent Lok Adalat to deal with pre-litigation, conciliation and settlement of disputes relating to Public Utility Services, as defined u/sec.22 A of the Legal Services Authorities Act, 1987, at pre-litigation stage itself, which would result in reducing the work load of the regular courts to a great extent.

- Permanent Lok Adalat for Public Utility Services, Hyderabad, India

Lok Adalat (people's courts), established by the government, settles dispute through conciliation and compromise. The First Lok Adalat was held in Chennai in 1986. Lok Adalat accepts the cases which could be settled by conciliation and compromise, and pending in the regular courts within their jurisdiction.

The Lok Adalat is presided over by a sitting or retired judicial officer as the chairman, with two other members, usually a lawyer and a social worker. There is no court fee. If the case is already filed in the regular court, the fee paid will be refunded if the dispute is settled at the Lok Adalat. The procedural laws, and the Evidence Act are not strictly followed while assessing the merits of the claim by the Lok Adalat.

Main condition of the Lok Adalat is that both parties in dispute should agree for settlement. The decision of the Lok Adalat is binding on the parties to the dispute and its order is

capable of execution through legal process. No appeal lies against the order of the Lok Adalat.

Lok Adalat is very effective in settlement of money claims. Disputes like partition suits, damages and matrimonial cases can also be easily settled before Lok Adalat as the scope for compromise through an approach of give and take is high in these cases.

Lok Adalat is a boon to the litigant public, where they can get their disputes settled fast and free of cost.

Pakistan

The relevant laws (or particular provisions) dealing with the ADR are summarised as under:

1. S.89-A of the Civil Procedure Code, 1908 (as amended in 2002) read with Order X Rule 1-A (deals with alternative dispute resolution methods). 2. The Small Claims and Minor Offences Courts Ordinance, 2002. 3. Sections 102–106 of the Local Government Ordinance, 2001. 4. Sections 10 and 12 of the Family Courts Act, 1964. 5. Chapter XXII of the Code of Criminal Procedure, 1898 (summary trial provisions). 6. The Arbitration Act, 1940. 7. Articles 153–154 of the Constitution of Pakistan, 1973 (Council of Common Interest) 8. Article 156 of the Constitution of Pakistan, 1973 (National Economic Council) 9. Article 160 of the Constitution of Pakistan, 1973 (National Finance Commission) 10.Article 184 of the Constitution of Pakistan, 1973 (Original Jurisdiction when federal or provincial governments are at dispute with one another)

ADR in the US Navy

SECNAVINST 5800.13A established the DON ADR Program Office with the following missions:

- Coordinate ADR policy and initiatives;
- Assist activities in securing or creating cost effective ADR techniques or local programs;
- Promote the use of ADR, and provide training in negotiation and ADR methods;
- Serve as legal counsel for in-house neutrals used on ADR matters; and,
- For matters that do not use in-house neutrals, the program assists DON attorneys and other representatives concerning issues in controversy that are amenable to using ADR.

The ADR Office also serves as the point of contact for questions regarding the use of ADR. The Assistant General Counsel (ADR) serves as the “Dispute Resolution Specialist” for the DON, as required by the Administrative Dispute Resolution Act of 1996. Members of the office represent the DON’s interests on a variety of DoD and interagency working groups that promote the use of ADR within the Federal Government.

Additional resources

Cornell University's Scheinman Institute on Conflict Resolution

Cornell's ILR School has joined forces with Cornell's Law School to present the country's most comprehensive conflict resolution program focusing on workplace alternative dispute resolution (ADR). The Martin and Laurie Scheinman Institute on Conflict Resolution mission

is to educate the next generation of neutrals – arbitrators, mediators and facilitators – who can help resolve disputes between employers and employees, both unionized and non-unionized. The Institute provides training for undergraduate and graduate students, consultation and evaluation, and conducts research. It also offers courses in two- to five-day sessions designed for professionals who are interested in or practicing in the workplace dispute resolution field. These highly intensive and participatory courses are coordinated by Cornell ILR faculty and are held in the ILR School's conference center in Manhattan and on the Ithaca campus. Participants can earn two certificates, Workplace Alternative Dispute Resolution and Conflict Management and Labor Arbitration.

Fordham Law School's Dispute Resolution Program

Fordham Law School's Dispute Resolution program placed in the top 10 of U.S. News and World Report's 2008 rankings of the best Dispute Resolution programs in the nation, according to the recently-released rankings. Along with Fordham's Clinical Training program, the Dispute Resolution program is the top-ranked specialty program at Fordham Law School. The Alternative Dispute Resolution program at Fordham combines an integrated agenda of teaching, scholarship, and practice in conflict resolution within the national and international communities. In addition to the classroom and clinical experience, the law school's student-run Dispute Resolution Society competes in ABA-sponsored interschool competitions as well as international mediation and arbitration competitions. In 2008 the Society's teams won the ABA Regional Negotiation Competition, placed third overall in the International Chamber of Commerce Commercial Mediation Competition in Paris, and reached the semifinals of the Willem C. Vis (East) International Commercial Arbitration Competition in Hong Kong. Additionally, Fordham's Dispute Resolution Society hosts an annual symposium on current Dispute Resolution topics and also teaches a class on dispute resolution skills to seniors at the Martin Luther King, Jr. High School in New York City.

Straus Institute for Dispute Resolution

Pepperdine University School of Law's Straus Institute for Dispute Resolution provides professional training and academic programs in dispute resolution including a Certificate, Masters in Dispute Resolution (MDR) and Masters of Law in Dispute Resolution (LLM). Straus provides education to law and graduate students, as well as mid-career professionals in areas of mediation, negotiation, arbitration, international dispute resolution and peacemaking. The Straus Institute has consistently ranked the number one Dispute Resolution school in the nation for the past 5 years, and has remained among the top 10 schools over the last decade.

Harvard Program on Negotiation

"The [Harvard] Program on Negotiation (PON) is a university consortium dedicated to developing the theory and practice of negotiation and dispute resolution. As a community of scholars and practitioners, PON serves a unique role in the world negotiation community. Founded in 1983 as a special research project at Harvard Law School, PON includes faculty, students, and staff from Harvard University, Massachusetts Institute of Technology and Tufts University. Harvard currently offers 12 week courses on negotiation and mediation for participants from all disciplines and professions as well as weekend seminars taught by their professors. The Harvard PON program is currently ranked #3 falling from #2 last year according to the US World and News Report, and has also remained among the top 10 schools over the last decade.

CUNY Dispute Resolution Consortium

The City University of New York Dispute Resolution Consortium (CUNY DRC) serves as an intellectual home to dispute-resolution faculty, staff and students at the City University of New York and to the diverse dispute-resolution community in New York City. At the United States' largest urban university system, the CUNY DRC has become a focal point for furthering academic and applied conflict resolution work in one of the world's most diverse cities. The CUNY DRC conducts research and innovative program development, has co-organized countless conferences, sponsored training programs, resolved a wide range of intractable conflicts, published research working papers and a newsletter. It also maintains an extensive database of those interested in dispute resolution in New York City, a website with resources for dispute resolvers in New York City and since , the CUNY DRC assumed a leadership role for dispute-resolvers in New York City by establishing an extensive electronic mailing list, sponsoring monthly breakfast meetings, conducting research on responses to catastrophes, and managing a public awareness initiative to further the work of dispute resolvers.

CPR Institute for Dispute Resolution

- The International Institute for Conflict Prevention and Resolution, known as the CPR Institute, is a New York City membership-based nonprofit organization that promotes excellence and innovation in public and private dispute resolution, serving as a primary multinational resource for avoidance, management, and resolution of business-related disputes.

The CPR Institute was founded in 1979 as the Center for Public Resources by a coalition of leading corporate general counsel dedicated to identifying and applying appropriate alternative solutions to business disputes, thereby mitigating the extraordinary costs of lengthy court trials.

CPR's mission is "to spearhead innovation and promote excellence in public and private dispute resolution, and to serve as a primary multinational resource for avoidance, management and resolution of business-related and other disputes. CPR is a nonprofit educational corporation existing under the New York state laws, and is tax exempt pursuant to Section 501(c)(3) of the U.S. Internal Revenue Code.

It is governed by a board of directors, and its priorities and policies are guided in large part by consultation with an executive advisory committee. Its funding derives in principal part from the annual contributions of its member organizations, and from its mission-related programming. The various operations and activities that fulfill the Institute's mission are captured in the acronym of its name:

C: CPR convenes legal and business leadership to develop, and encourage the exchange of, best practices in avoiding, managing and resolving disputes.

P: CPR publishes its own work and that of other like-minded organizations, making resources available to a global community of problem-solvers.

R: CPR helps to resolve complex disputes among sophisticated parties, by devising rules, protocols and best practices, and by providing disputants with resources and consulting expertise in selecting appropriate methods and neutrals to assist in the dispute resolution process.

ICAR

Established at George Mason as an alternative to a sociology program due to Virginia's then policy against duplicating graduate schools, it was the nation's first major dispute resolution graduate program. It has been a major success.

Mediation

Mediation, a form of alternative dispute resolution (ADR) or "appropriate dispute resolution", aims to assist two (or more) disputants in reaching an agreement. The parties themselves determine the conditions of any settlements reached— rather than accepting something imposed by a third party. The disputes may involve (as parties) states, organizations, communities, individuals or other representatives with a vested interest in the outcome.

Mediation, in a broad sense, consists of a cognitive process of reconciling mutually interdependent, opposed terms as what one could loosely call "an interpretation" or "an understanding of". The German philosopher Hegel uses the term 'dialectical unity' to designate such thought-processes. This article discusses the legal communications usage of the term. Other Wikipedia articles, such as Critical Theory, treat other usages or "senses" of the term "mediation," as for example cultural and biological.

Mediators use appropriate techniques and/or skills to open and/or improve dialogue between disputants, aiming to help the parties reach an agreement (with concrete effects) on the disputed matter. Normally, all parties must view the mediator as impartial. Disputants may use mediation in a variety of disputes, such as commercial, legal, diplomatic, workplace, community and family matters. A third-party representative may contract and mediate between (say) unions and corporations. When a workers' union goes on strike, a dispute takes place, and the corporation hires a third party to intervene in attempt to settle a contract or agreement between the union and the corporation.

Mediation is the only way assisted by one third, which promotes freedom of choice of protagonists in a conflict

History of mediation

The activity of mediation in itself appeared in very ancient times. Historians presume early cases in Phoenician commerce (but suppose its use in Babylon, too). The practice developed in Ancient Greece (which knew the non-marital mediator as a *proxenetas*), then in Roman civilization, (Roman law, starting from Justinian's *Digest* of 530 - 533 CE) recognized mediation. The Romans called mediators by a variety of names, including *internuncius*, *medium*, *intercessor*, *philantropus*, *interpolator*, *conciliator*, *interlocutor*, *interpres*, and finally *mediator*.

Some cultures regarded the mediator as a sacred figure, worthy of particular respect; and the role partly overlapped with that of traditional wise men or tribal chief.

Mediation and conciliation

"Conciliation" sometimes serves as an umbrella-term that covers all mediation and facilitative and advisory dispute-resolution processes. Neither process determines an

outcome, and both share many similarities. For example, both processes involve a neutral third-party who has no enforcing powers.

One significant difference between conciliation and mediation lies in the fact that conciliators possess expert knowledge of the domain in which they conciliate. The conciliator can make suggestions for settlement terms and can give advice on the subject-matter. Conciliators may also use their role to actively encourage the parties to come to a resolution. In certain types of dispute the conciliator has a duty to provide legal information. This helps any agreement reached to comply with any relevant statutory framework pertaining to the dispute. Therefore conciliation may include an advisory aspect.

Mediation works purely facilitatively: the practitioner has no advisory role. Instead, a mediator seeks to help parties to develop a shared understanding of the conflict and to work toward building a practical and lasting resolution.

Several different styles of mediation exist: evaluative, facilitative, and transformative. Evaluative mediation has somewhat of an advisory role in that its practitioners evaluate the strengths and weaknesses of each side's argument should they go to court; whereas facilitative mediators and transformative mediators do not do this.

Furthermore, the definitions of mediation used by the different styles of mediation differ in that evaluative mediation has the main drive and goal of settlement, while transformative mediation, in contrast, looks at conflict as a crisis in communication and seeks to help resolve the conflict, thereby allowing people to feel empowered in themselves and better about each other. The agreement that arises from this type of mediation occurs as a natural outcome of the resolution of conflict.

Both mediation and conciliation serve to identify the disputed issues and to generate options that help disputants reach a mutually-satisfactory resolution. They both offer relatively flexible processes; and any settlement reached should have the agreement of all parties. This contrasts with litigation, which normally settles the dispute in favour of the party with the strongest legal argument. In-between the two operates collaborative law, which uses a facilitative process where each party has counsel.

Why choose mediation

Several reasons exist for choosing mediation over other channels of dispute resolution (such as those involving attorneys and courts).

- Parties to a dispute may choose mediation as (often) a less expensive route to follow for dispute resolution. While a mediator may charge a fee comparable to that of an attorney, the mediation process generally takes much less time than moving a case through standard legal channels. While a case in the hands of a lawyer or filed in court may take months or even years to resolve, a case in mediation usually achieves a resolution in a matter of hours. Taking less time means expending less money on hourly fees and costs.

- Mediation offers a confidential process. While court hearings of cases happen in public, whatever happens in mediation remains strictly confidential. No one but the parties to the dispute and the mediator(s) know what has gone on in the mediation forum. In fact, confidentiality in mediation has such importance that in most cases the legal system cannot force a mediator to testify in court as to the content or

progress of a mediation. Many mediators actually destroy their notes taken during a mediation once that mediation has finished. The only exceptions to such strict confidentiality usually involve child abuse or actual or threatened criminal acts.

- Mediation offers multiple and flexible possibilities for resolving a dispute and for the control the parties have over the resolution. In a case filed in court, the parties will obtain a resolution, but a resolution thrust upon the parties by the judge or jury. The result probably will leave neither party to the dispute totally happy. In mediation, on the other hand, the parties have control over the resolution, and the resolution can be unique to the dispute. Often, solutions developed by the parties are ones that a judge or jury could not provide. Thus, mediation is more likely to produce a result that is mutually agreeable, or win/win, for the parties. And because the result is attained by the parties working together and is mutually agreeable, the compliance with the mediated agreement is usually high. This also results in less costs, because the parties do not have to seek out the aid of an attorney to force compliance with the agreement. The mediated agreement is, however, fully enforceable in a court of law.

- The mediation process consist of a mutual endeavor. Unlike in negotiations (where parties are often entrenched in their positions), parties to a mediation usually seek out mediation because they are ready to work toward a resolution to their dispute. The mere fact that parties are willing to mediate in most circumstances means that they are ready to "move" their position. Since both parties are willing to work toward resolving the case, they are more likely to work with one another than against one another. The parties thus are amenable to understanding the other party's side and work on underlying issues to the dispute. This has the added benefit of often preserving the relationship the parties had before the dispute.

- Finally, but certainly not least, and as mentioned earlier in this article, the mediation takes place with the aid of a mediator who is a neutral third party. A good mediator is trained in conflict resolution and in working with difficult situations. The good mediator is likely to work as much with the emotional aspects and relationship aspects of a case as he or she is to work on the "topical" issues of the matter. The mediator, as a neutral, gives no legal advice, but guides the parties through the problem solving process. The mediator may or may not suggest alternative solutions to the dispute. Whether he or she offers advice or not, the trained mediator helps the parties think "outside of the box" for possible solutions to the dispute, thus enabling the parties to find the avenue to dispute resolution that suits them best.

Mediation in the franchising sector

Franchise-agreements represent ongoing commercial agreements between the contracting parties. The agreements usually have elements of an imbalance of bargaining power and of an imbalance of business experience between the franchisee and franchisor; and the parties also face many external commercial pressures.

The franchising code of conduct functions as a mandatory code under the TPA. All franchise agreements must have a clause that requires dispute resolution. Mediation in this field works because it can identify alternatives for the parties and then the parties can work together to solve the dispute. This type of mediation has formal procedures: for example: whoever wishes to initiate the mediation must advise the respondent in writing, outlining the nature of the dispute ,and they will then have three weeks to agree to a method of resolving the dispute otherwise they may go to mediation. For further information on

mediation in the franchise community, and links to further resources, see www.FranchiseMediation.org.

Early neutral evaluation and mediation

The technique of early neutral evaluation (ENE) provides early focus in complex commercial disputes, and — based on that focus — offers a basis for sensible case-management or a suggested resolution of the entire case in its very early stages.

In early neutral evaluation, an evaluator acts as a neutral person to assess the strengths and weaknesses of each of the parties and to discuss the same with parties jointly or in caucuses, so that parties gain awareness (via independent evaluation) of the merits of their case. In the case of mediation, solutions normally emerge from the parties themselves and mediators endeavour to find the most acceptable solution by bridging gaps between the parties.

Parties generally call on a senior counsel or on a panel with expertise and experience in the subject-matter under dispute in order to conduct ENE. One refers to such persons as "evaluators" or as "neutral persons".

Mediator education and training

Suitable education and training for mediators becomes a complex issue — largely due to the breadth of areas which may call on mediation as a means of dispute-resolution. Debate ensues on what constitutes adequate training on the principles of mediation as well as what personal attributes an individual needs in order to effectively carry out a mediator's role.

The educational requirements for accreditation as a mediator differ between accrediting groups and from country to country. In some cases legislation mandates these requirements; while in others professional bodies impose standards and applicants must comply prior to becoming accredited by them. Many US universities offer graduate studies in mediation, culminating in the PhD or DMed degrees.

In Australia, for example, professionals wanting to practise in the area of family law must have tertiary qualifications in law or in social science, undertake 5 days training in mediation and engage in at least 10 hours of supervised mediation. Furthermore, they must also undertake 12 hours of mediation-education or training every 12 months.

Other institutions offer units in mediation across a number of disciplines such as law, social science, business and the humanities. In Australia not all fields of mediation-work require academic qualifications, as some deal more with practical skills rather than with theoretical knowledge: to this end membership-organizations provide training-courses to further the adoption and practice of mediation. Internationally a similar approach to the training of mediators is taken by the organization CEDR, which trains 300 mediators a year in China, Hong Kong, India, Ireland, Nigeria, Pakistan, United Kingdom, Ukraine and elsewhere.

No legislated national or international standards on the level of education which should apply to all mediation practitioner's organizations exist. However, organizations such as the National Alternative Dispute Resolution Advisory Council (NADRAC) in Australia continue to advocate for a wide scope on such issues. Other systems apply in other jurisdictions such as Germany, which advocates a higher level of educational qualification for practitioners of mediation.

Providing an Introduction

When starting off a mediation session an introduction can set the vibe for the entire discussion. This being said, it is quite important to be detailed so both parties can start off on the same page regardless of their differences. There are multiple steps to be taken when making an informed introduction. Every mediator's introduction is different depending on what they decide to cover (Domenici,2001). These steps are usually included.

- Introduction of mediators and parties
- Words of encouragement
- Explanation of the process and definitions of mediation and the mediator's role
- Ground rule or communication guidelines
- Confidentiality provisions
- Caucus possibility
- Signing the agreement to mediate
- Asking for questions

Mediator codes of conduct

The application of a code of conduct to the practice of mediation becomes problematic — due in part to the diverse number and type of practitioners in the field. A tendency exists for professional societies to develop tamples of this in Australia include the mediation codes of conduct developed by the Law Societies of South Australia and Western Australia and those developed by organisations such as Institute of Arbitrators & Mediators Australia (IAMA) and LEADR for use by their members. Other organizations such as the American Center for Conflict Resolution Institute ([www.accri.org]) have developed both classroom and distance learning courses which subscribe to its mission of promoting peace through education. The CPR/Georgetown Ethics Commission (www.cpradr.org), the Mediation Forum of the Union International des Avocats, and the European Commission have also promulgated codes of conduct for mediators.

Writers in the field of mediation normally espouse a code of conduct that mirrors the underlying principles of the mediation process. In this respect some of the most common aspects of a mediator codes of conduct include:

- a commitment to inform participants as to the process of mediation.
- the need to adopt a neutral stance towards all parties to the mediation, revealing any potential conflicts of interest.
- the requirement for a mediator to conduct the mediation in an impartial manner
- within the bounds of the legal framework under which the mediation is undertaken any information gained by the mediators should be treated as confidential.
- mediators should be mindful of the psychological and physical wellbeing of all the mediations participants.
- mediators should not offer legal advice, rather they should direct participants to appropriate sources for the provision of any advice they might need.
- mediators should seek to maintain their skills by engaging in ongoing training in the mediation process.
- mediators should practise only in those fields in which they have expertise gained by their own experience or training.

Accreditation of ADR in Australia

Australia has no national accreditation system for ADR. However, following the National Mediation Conference in May 2006, the National Mediation Accreditation Standards system has apparently started to move to its implementation phase.

ADR practitioners recognize that mediators (as distinct from arbitrators or conciliators) need to be recognized as having professional accreditations the most. There are a range of organizations within Australia that do have extensive and comprehensive accreditations for mediators but people that use mediation are unsure as to what level of accreditation is required for the quality of service that they receive. Standards will tend to vary according to the specific mediation and the level of specificity that is desired. Due to the wide range of ADR processes that are conducted it would be very difficult to have a set of standards that could apply to all ADR processes, but standards should be developed for particular ADR processes

Clients need the assurance that mediators have some form of ongoing assessment and training throughout their careers. Mediators must satisfy different criteria to be eligible for a variety of mediator panels. Also different mediator organizations have different ideals of what makes a good mediator which in turn reflects the training and accreditation of that particular organization. Selection processes for ADR practitioners are based on the needs of the service, but a problem is posed when organizations, such as the court want to refer a client to mediation and they usually have to rely on their in-house mediators or rely on word of mouth. There are inconsistent standards. A national accreditation system could very well enhance the quality and ethics of mediation and lead mediation to become more accountable. There is a need for a unified accreditation system for mediators across Australia to establish clarity and consistency.

es of mediation

One core problem in the dispute-resolution process involves the determination of what the parties actually dispute. Through the process of mediation participants can agree to the scope of the dispute or issues requiring resolution. Examples of this use of mediation in the Australian jurisdiction include narrowing the scope of legal pleadings and its use in industrial and environmental disputes.

Definition of the nature of a dispute can often clarify the process of determining what method will best suit its resolution.

One of the primary uses of mediation involves parties using the mediation process to define the issues, develop options and achieve a mutually-agreed resolution.

Australia has incorporated mediation extensively into the dispute-settlement process of family law and into the latest round of reforms concerning industrial relations under the WorkChoices amendments to the Workplace Relations Act.

Where prospects exist of an ongoing disputation between parties brought on by irreconcilable differences (stemming from such things as a clash of religious or cultural beliefs), mediation can serve as a mechanism to foster communication and interaction.

Mediation can function not only as a tool for dispute resolution but also as a means of dispute prevention. Mediation can be used to facilitate the process of contract negotiation by the identification of mutual interests and the promotion of effective communication between

the two parties. Examples of this use of mediation can be seen in recent enterprise bargaining negotiations within Australia.

Governments can also use mediation to inform and to seek input from stakeholders in formulation or fact-seeking aspects of policy-making. Mediation in wider aspect can also serve to prevent conflict or to develop mechanisms to address conflicts as they arise.

Native-title mediation in Australia

In response to the Mabo decision by the High Court of Australia, the Australian Government sought to alleviate the concerns of a wide section of the population and industry on the decisions implications on land tenure and use by enacting the Native Title Act 1993 (Cth). A cornerstone of the act is the use of mediation as a mechanism to determine future native title rights within Australia.

Although not barring litigation, the Act seeks to promote mediation through a process incorporating the Federal Court and the National Native Title Tribunal (NNTT). This is seen as having a better long tern success by providing flexible and practical solutions to the needs of the various stakeholders.

The extensive use of mediation in the resolution of native title matters does not stop the referral of matters to the courts for resolution, nor is mediation precluded from occurring whilst legal challenges are being pursued. A recent case where Native Title rights were found exist over a large portion of the City of Perth has seen the simultaneous use of mediation and formal legal appeals processes.

A key feature of Native Title mediation involves the use of Indigenous Land Use Agreements (ILUAs). These binding agreements are negotiated between native title claimant groups and others such as pastoralists, miners and local governments and cover aspects of the use of the land and any future act such as the granting of mining leases.

Some of the features of native title mediation which distinguish it from other forms include the likelihood of lengthy negotiation time frames, the number of parties (ranging on occasion into the hundreds) and that statutory and case law prescriptions constrain some aspects of the negotiations.

Philosophy of mediation

The uses of mediation in preventing conflicts

Mediation is adaptable to anticipate problems, grievances and difficulties between parties before the conflict may arise. This has potential applications in large and private sector organisations, particularly where they are subject to excessive change, competition and economic pressure. A key way mediation is used to prevent these conflicts is complaint handling and management. This is a conflict prevention mechanism designed to handle a complaint effectively at first contact and to minimise the possibility of it developing into a dispute. According to Charlton (2000, p. 4) a person who undertakes this role is commonly known as a “dispute preventer”.

While the corporate sector may provide one area in which to use the mediation process for preventing conflicts, dealing with everyday life’s disputes provides another. This is no more evident in neighbourhood conflict. One's behaviour affects one's neighbours, just as what

they do affects you. The key way to prevent conflicts with neighbours is to behave as a good neighbour oneself. Spencer and Altobelli (2005, p. 17) believe simple consideration and conversation with neighbours helps achieve a peaceful coexistence. Making it is easier for you to live as privately or as sociably as you wish. Ideal suggestions for consideration in preventing conflicts between neighbours include:

- meeting one's neighbors
- keeping one's neighbors informed
- awareness of differences
- appreciation
- consideration of one's neighbors' points of view
- showing candidness
- communicating
- demonstrating respect

One can also employ mediation to reduce or prevent violence in sports and in schools, using peers as mediators in a process known as **peer mediation**. This process (highlighted by Cremin) provides a way of handling conflicts and preventing violence in primary schools and high schools. Schools adopting this process often recruit and train students interested in being peer mediators.

In general, effective communication provides the ideal way to prevent and resolve any conflict; talking things over — along with listening — handles problems optimally and should ultimately avoid the dispute going to the courts.

Responsibilities regarding confidentiality in mediation

One of the hallmarks of mediation is that the process is strictly confidential. The mediator must inform the parties that communications between them during the intake discussions and the mediation process are to be private and confidential. In general, the information discussed can never be used as evidence in the event that the matter does not settle at mediation and proceeds to a court hearing. Spencer and Altobelli (2005, p. 261) point out it is considered common for parties entering into mediation to sign a mediation agreement document with the mediator. The parties therefore agree that it’s a condition of being present or participating in the mediation and the document if necessary may be deemed confidential by virtue of the common law.

Confidentiality lies at the heart of mediation. It is imperative for parties to trust the process. Very few mediations will ever succeed unless the parties can communicate fully and openly without fear of compromising their case before the courts. Charlton and Dewdney (2004, p. 344.) highlight mediation confidentiality is seen as one of the key ingredients to encourage disputing parties to negotiate with each other in order to achieve a settlement of their dispute.

Organisations have often seen confidentiality as a reason to use mediation ahead of litigation, particularly when disputes arise in sensitive areas of their operation, or to avoid their affairs becoming publicised among business competitors, acquaintances or friends. Steps put in place during mediation to help ensure this privacy include;

1. The mediation meeting is conducted behind closed doors.
2. Outsiders can only observe proceedings with both parties consent.
3. No recording of the transcript is kept; and

4. There is no external publicity on what transpired at the mediation.

There is no doubt confidentiality contributes to the success and integrity of the mediation process. However it will be difficult for a mediator to guarantee full confidentiality protection between the parties.

Legal implications of mediated agreements

Parties who enter into mediation do not forfeit any legal rights or remedies. If the mediation process does not result in settlement, each side can continue to enforce their rights through appropriate court or tribunal procedures. However, if a settlement has been reached through mediation, legal rights and obligations are affected in differing degrees. In some situations, the parties may only wish to have a memorandum or a moral force agreement put in place; these are often found in community mediations. In other instances, a more comprehensive deed of agreement is drafted and this deed serves to bring a legally binding situation. Charlton and Dewdney (2004, p. 126.) point out that a mediated agreement may be registered with the court to make it legally binding and it is advisable to have a lawyer prepare the form or, at the very least, to obtain independent legal advice about the proposed terms of the agreement.

Mediation has opened the door for parties in conflict to resolve their differences through non-traditional judicial forums. Over the last few decades, mediation has brought to light the processes, or alternatives to litigation, that enable parties to resolve their differences without the high cost associated with litigation. An interesting remark made by Spencer and Altobelli (2005, p. 223): "Court systems are eager to introduce mandatory mediation as a means to meet their needs to reduce case loads and adversarial litigation, and participants who understand the empowerment of mediation to self-determine their own agreements are equally as eager to embrace mediation as an alternative to costly and potentially harmful litigation."

Recently], mediation has come under the spotlight and the watchful eye of many state legal systems for its ability to resolve party disputes, reduce court case loads, and reduce overall legal costs. Yet while parties enter into mediation intending to preserve their legal rights and remedies, mediation may result in these rights being directly or indirectly affected. Parties that have resolved their conflict through this voluntary process and settled on an agreement should seek legal advice if they are unsure of the consequences.

Common aspects of mediation

Mediation as a process involves a third party (often an impartial third party) assisting two or more persons, ("parties" or "stakeholders") to find mutually-agreeable solutions to difficult problems.

People make use of mediation at many different levels and in multiple contexts: from minor disputes to global peace-talks. This makes it difficult to provide a general description without referring to practices in specific jurisdictions — where "mediation" may in fact have a formal definition and in some venues may require specific licenses. This article attempts only a broad introduction, referring to more specific processes (such as peace process, binding arbitration, or mindful mediation) directly in the text.

While some people loosely use the term "mediation" to mean any instance in which a third party helps people find agreement, professional mediators generally believe it essential that

mediators have thorough training, competency, and continuing education. The term "mediation" also sometimes occurs incorrectly referring to arbitration; a mediator does not impose a solution on the parties, whereas an arbitrator does.

While mediation implies bringing disputing parties face-to-face with each other, the strategy of "shuttle diplomacy", where the mediator serves as a liaison between disputing parties, also sometimes occurs as an alternative.

Some of the types of disputes or decision-making that often go to mediation include the following:

Family:

- Prenuptial/Premarital agreements
- Financial or budget disagreements
- Separation
- Divorce
- Financial distribution and spousal support (alimony)
- Parenting plans (child custody and visitation)
- Eldercare issues
- Family businesses
- Adult sibling conflicts
- Disputes between parents and adult children
- Estate disputes
- Medical ethics and end-of-life issues

Workplace:

- Wrongful termination
- Discrimination
- Harassment
- Grievances
- Labor management

Public disputes:

- Environmental
- Land-use

Disputes involving the following issues:

- Landlord/tenant
- Homeowners' associations
- Builders/contractors/realtors/homeowners
- Contracts of any kind
- Medical malpractice
- Personal injury
- Partnerships
- Non-profit organizations
- Faith communities

Other:

- Youth (school conflicts; peer mediation);
- Violence-prevention
- Victim-Offender mediation

Mediation commonly includes the following aspects or stages:

- a controversy, dispute or difference of positions between people, or a need for decision-making or problem-solving
- decision-making remaining with the parties rather than imposed by a third party
- the willingness of the parties to negotiate a "positive" solution to their problem, and to accept a discussion about respective interests and objectives
- the intent to achieve a "positive" result through the facilitative help of an independent, neutral third person

In the United States, mediator codes-of-conduct emphasize "client-directed" solutions rather than those imposed by a mediator in any way. This has become a common, definitive feature of mediation in the US and in the UK.

Mediation differs from most other adversarial resolution processes by virtue of its simplicity, informality, flexibility, and economy.

The typical mediation has no formal compulsory elements, although some common elements usually occur:

- each of the parties allowed to explain and detail their story;
- the identification of issues (usually facilitated by the mediator);
- the clarification and detailed specification of respective interests and objectives;
- the conversion of respective subjective evaluations into more objective values;
- identification of options;
- discussion and analysis of the possible effects of various solutions;
- the adjustment and the refining of the proposed solutions;
- the memorialization of agreements into a written draft

Due to the particular character of this activity, each mediator uses a method of his or her own (the law does not ordinarily govern a mediator's methods), that might eventually differ markedly from the above scheme. Also, many matters do not legally require a particular form for the final agreement, while others expressly require a precisely determined form.

Most countries respect a mediator's confidentiality.

Online mediation

Online mediation, a sub-category of online dispute resolution, involves the application of online technology to the process of mediation. Online Mediation extends the reach of mediators to disputes between persons who are too geographically distant, or otherwise unable (for example, through disability), to attend; or where the value of the dispute does not justify the cost of a face-to-face mediation. Online mediation can also prove useful prior to face-to-face mediation — to commence the mediation process early where urgency exists, to narrow the issues, to commence brainstorming of solutions and to prepare the parties.

Mediation in business and in commerce

The eldest branch of mediation applies to business and commerce and still this one is the widest field of application, with reference to the number of mediators in these activities and to the economical range of total exchanged values.

The mediator in business or in commerce helps the parties to achieve the final goal of respectively buying/selling (a generic contraposition that includes all the possible varieties of the exchange of goods or rights) something at satisfactory conditions (typically in the aim of producing a bilateral contract), harmonically bringing the separate elements of the treaty to a respectively balanced equilibrium. The mediator, in ordinary practice, usually cares of finding a positive agreement between (or among) the parties looking at the main pact as well as at the accessory pacts too, thus finding a composition of all the related aspects that might combine. in the best possible way, all the *desiderata* of his clients.

Academics sometimes include this activity among the auxiliary activities of commerce and business, but it has to be recalled that it differs from the generality of the others, because of its character of independence from the parties: in an ordinary activity of agency, or in the unilateral mandate this character is obviously missing, this kind of agent merely resulting as a *longa manus* of the party that gave him his (wider or narrower) power of representation. The mediator does not obey to any of the parties, and is a third party, looking at the contraposition from an external point of view.

Subfields of commercial mediation include work in well-known specialized branches: in finance, in insurance, in ship-brokering, in real estate and in some other individual markets, mediators have specialized designations and usually obey special laws. Generally, mediators cannot practice commerce in the genre of goods in which they work as specialized mediators.

Mediation and litigation

Mediation offers a process by which two parties work towards an agreement with the aid of a neutral third party. Litigation, however, is a process in which the courts impose binding decisions on the disputing parties in a determinative process operating at the level of legal rights and obligations [Boulle 2005]. These two processes sound completely different, but both are a form of dispute resolution. Litigation is conventionally used and conventionally accepted, but Mediation is slowly becoming more recognized as a successful tool in dispute resolution. Slowly these processes are becoming inter-dependent, as the Courts in some cases are now referring parties to Mediation. In saying this, there are distinct differences between the two processes. Mediation claims to resolve many of the problems associated with litigation, such as the high costs involved, the formality of the court system and the complexity of the court process. Mediation does not create binding agreements unless the parties consent to it, and the Mediator has no say in the outcome. Even though our court system and mediation have increasing connections, they still reflect different value assumptions and structural approaches towards dispute resolution.

Community mediation

Disputes involving neighbors often have no formal dispute-resolution mechanism. Community-mediation centers generally focus on this type of neighborhood conflict, with trained volunteers from the local community usually serving as mediators. These organizations often serve populations that cannot afford to utilize the court systems or other private ADR-providers. Many community programs also provide mediation for disputes between landlords and tenants, members of homeowners associations, and businesses and consumers. Mediation helps the parties to repair relationships, in addition to addressing a

particular substantive dispute. Agreements reached in community mediation are generally private, but in some states, such as California, the parties have the option of making their agreement enforceable in court. Many community programs offer their services for free or at most, charge a nominal fee.

The roots of community mediation can be found in community concerns to find better ways to resolve conflicts, and efforts to improve and complement the legal system. Citizens, neighbors, religious leaders* and communities became empowered, realizing that they could resolve many complaints and disputes on their own in their own community through mediation. Experimental community mediation programs using volunteer mediators began in the early 1970s in several major cities. These proved to be so successful that hundreds of other programs were founded throughout the country in the following 2 decades. Community mediation programs now flourish throughout the United States.

Competence of the mediator

Numerous schools of thought exist on identifying the "competence" of a mediator. Where parties retain mediators to provide an evaluation of the relative strengths and weaknesses of the parties' positions, subject-matter expertise of the issues in dispute becomes a primary aspect in determining competence.

Some would argue, however, that an individual who gives an opinion about the merits or value of a case does not practise "true" mediation, and that to do so fatally compromises the alleged mediator's neutrality.

Where parties expect mediators to be process experts only (i.e., employed to use their skills to work through the mediation process without offering evaluations as to the parties' claims) competence is usually demonstrated by the ability to remain neutral and to move parties though various impasse-points in a dispute. International professional organizations continue to debate what competency means.

In France, professional mediators have created an organization to develop a rational approach to conflict resolution. This approach is based on a scientific definition of a person and a conflict. It helps to develop a structured process of mediation interviews and meetings of the parties. Technology mediators are particularly advanced in terms of accompanying changes induced by the dynamics of conflict. Mediators have adopted a code of ethics which provides the protagonists guarantees professionalism. They know their technical including through a website, the wikimediation, create by Jean-Louis Lascoux and funded by the European Commission.

When to use mediation

Not all disputes lend themselves well to mediation. One set of criteria for suitability, which is applied in the subsection below, is provided in *Mediation - Principles Process Practice, Boulle L. 2005*

Factors relating to the parties

Factors relating to the parties provide the most important determinants when deciding whether or not a dispute lends itself to mediation, as of course, the parties are the essential key to mediation. Basically, if the parties are not ready and willing to mediate, mediation cannot take place. If a mediation does take place against the parties wishes, the process will

not work because one of the principles of mediation is participation, and the parties will not constructively participate if they are forced. Another factor to consider when judging a disputes suitability for mediation is whether the parties have legal representation. If one party does and the other does not, then it is not fair to mediate. Unlike the court system, a legal representative will not be appointed to the non-represented party. Therefore both parties need to consent to either be represented by legal advisers or not. It is not essential that legal advisers are present in the mediation session. However in most cases it is strongly advised that the parties seek legal advice before signing the legally binding agreement. A final factor to consider is the legal capacity of the parties. A minor cannot enter a mediation session for obvious legal reasons, the same goes for a person with mental illness or disability that would effect their decision-making ability. Once these are considered and no difficulties found, the remaining points on the checklist need to be considered.

Preparing for mediation

People participating in mediation, often called “parties” or “disputants”, can take several steps to prepare for mediation, as can their lawyers, if involved.

Just as parties need not agree to take part in mediation, they need not prepare for mediation — with one notable exception. In some court-connected programs, courts will require disputants to both participate in and prepare for mediation. Preparation involves making a statement or summary of the subject of the dispute and then bringing the summary to the mediation.

If preparation for mediation is voluntary, why bother? Research uncovered the following potential benefits of preparing. Disputants who meet the mediator prior to the mediation meeting tend to have less anxiety, a higher percentage of their disputes settle at mediation, and they express increased satisfaction with the mediation process.

The following preparation activities appear in no fixed order. Not all would apply for every mediation.

Is mediation the right dispute resolution process at this time? This subdivides into two questions: is mediation the right dispute resolution process?; and are the parties ready to settle? For example, the dispute may involve a significant power-imbalance between the parties. In such a case, another dispute resolution process may make a better job of balancing power.

Readiness has great importance. Perhaps a loss or injury has occurred too recently. Overwhelming emotions may render objective decision-making extremely difficult, if not impossible. Alternatively, an injury may not have had sufficient time to heal so that any continuing loss becomes difficult to quantify. Other examples abound. Although entering into a mediation to settle the entire dispute may seem inappropriate, this does not mean that mediation cannot help. Some disputants participate in brief mediations with the goal of finding an interim solution to the problem that manages what the parties need to investigate during the interval between the present and when the dispute is ready to be settled.

Another preliminary mediation task involves identifying who should participate in the mediation. Laws give decision-making power to certain individuals. It seems obvious that these individuals are essential to the mediation. Others important participants could include lawyers, accountants, support-persons, interpreters, or spouses. Ask: who needs to be involved in order to reach settlements that will be accepted and implemented?

Convening a mediation meeting requires as much care as convening any important meeting. What location will best foster settlement? Do any participants have special needs? What date and time will work best? Will participants have access to food and beverages? Should the room have a table and chairs, or couches? Does the room have natural light? Does it offer privacy? How much time might a mediation take?

At times disputants have the ability to select the mediator: they should exercise due diligence. Anyone can act as a mediator, with no licensing required. Some mediator organizations require mediators to qualify. Mediators listed in court-connected rosters have to meet certain experiential and training requirements. Many mediators have a wide range of skills. Matching the mediator with the dispute and the needs of the disputant comprises a pre-mediation task. For example, the mediator will need to have skill in managing the many parties involved in a land-use dispute. Expertise in family law may prove important in divorce mediation, while knowledge of construction matters will add value in construction disputes.

The task of selecting the right mediator can occur more readily when participants take time to analyze the dispute. Just what is the dispute about? Parties probably agree in some areas. By identifying agreements, parties clarify the issues in dispute. Typically, misunderstandings occur. These usually result from assumptions. What if these can get cleared up? Might some information be missing? and if all of the disputants shared all of the information, wou;d the matter quickly settle?

Mediation involves communication and commitment to settle. Disputants can hone their communication-skills prior to mediation so that they express what they want more clearly and so that they hear what the other disputants say about what a settlement needs to include. Sometimes the dispute isn't about money. Rather, a sincere apology will resolve matters. When disputants communicate respectfully, they generate more opportunities for creative settlements.

What objectives does each of the disputants have? Thinking about creative ways that each disputant can achieve their objectives before the mediation allows participants to check out the viability of possible outcomes. They come to the meeting well prepared to settle.

What information do participants require in order to make good decisions? Do pictures, documents, corporate records, pay-stubs, rent-rolls, receipts, medical reports, bank-statements and so forth exist that parties need to gather, copy and bring to the mediation? With all of the information at hand at the mediation, one may avoid the need to adjourn the meeting to another, later date while parties gather the information. And one minimises the risk of overlooking a critical piece of information.

Parties may need to make procedural choices. One important decision involves whether to keep the mediation. Other decisions address how to pay the mediator and whether to share all information relevant to the dispute. A contract signed before the mediation can address all procedural decisions. These contracts have various names, such as "Agreement to Mediate" or "Mediation Agreement". Mediators often provide an Agreement to Mediate. Disputants, and their lawyers, can (by agreement) insert appropriate provisions into the agreement. In some cases, court-connected mediation programs have pre-determined procedures.

Mediators have a wide variety of practices in matters of contact with the disputants or their lawyers prior to the mediation meeting. Some mediators hold separate, in-person preliminary meetings with each disputant. These have many names, including "preliminary

conferences". Disputants who meet with the mediator before the mediation learn about the process of mediation, their own role, and what the mediator will do. Having met the mediator before the mediation, disputants can put to rest any concerns about whether they can trust the mediator's neutrality and impartiality; and they can focus on how to resolve the dispute.

The above outline sets out the most significant steps in preparation for mediation. Each unique dispute may require a unique combination of preliminary steps.

Mediation as a method of dispute resolution

In the field of resolving legal controversies, mediation offers an informal method of dispute resolution, in which a neutral third party, the mediator, attempts to assist the parties in finding resolution to their problem through the mediation process. Although mediation has no legal standing *per se*, the parties can (usually with assistance from legal counsel) commit agreed points to writing and sign this document, thus producing a legally binding contract in some jurisdiction specified therein.

Mediation differs from most other conflict resolution processes by virtue of its simplicity, and in the clarity of its rules. It is employed at all scales from petty civil disputes to global peace talks. It is thus difficult to characterize it independently of these scales or specific jurisdictions - where 'Mediation' may in fact be formally defined and may in fact require specific licenses. There are more specific processes (such as peace process or binding arbitration or mindful mediation) referred to directly in the text.

Safety, fairness, closure

These broader political methods usually focus on conciliation, preventing future problems, rather than on focused dispute-resolution of one matter.

One can reasonably see mediation as the simplest of many such processes, where no great dispute exists about political context, where jurisdiction has been agreed, whatever process selected the mediator is not in doubt, and there is no great fear that safety, fairness and closure guarantees will be violated by future bad-faith actions.

Assuming some warranty of safety, fairness, and closure, then the process can reasonably be called 'mediation proper', and be described thus:

Post-mediation activities

Some mediated agreements require ratification by an external body to which a negotiating party must account — such as a board, council or cabinet. In other situations it may be decided or understood that agreements will be reviewed by lawyers, accountants or other professional advisers after the mediation meeting. Ratification and review provide safeguards for mediating parties. They also provide an opportunity for persons not privy to the dynamics of a mediation and the efforts of the negotiating parties to undermine significant decisions they have made.

In the United States, the implementation of agreements reached in mediation requires tailoring to the mediated subject. For example, successful family and divorce mediations must memorialize an agreement which complies with the statutes of the state in which the parties will implement their mediated agreement. In New York, for example, the New York Domestic Relations Law specifies both technical and substantive requirements with which

pre-marital (or pre-nuptial) and post-marital (or post-nuptial) agreements must comply (NY Domestic Relations Law, Sec. 236, Part B).

Official sanctions

In some situations the sanctions of a court or other external authority must validate a mediation agreement. Thus if a grandparent or other non-parent is granted residence rights in a family dispute, a court counselor will be required to furnish a report to the court on merits of the proposed agreement. parties to a private mediation may also wish to obtain court sanction for their decisions. Under the Queensland regulatory scheme on court connected mediation, mediators are required to file with a registrar a certificate about the mediation in a form prescribed in the regulations. A party may subsequently apply to a relevant court an order giving effect to the agreement reached. Where court sanction is not obtained, mediated settlements have the same status as any other agreements.

Referrals and reporting-obligations

Mediators may at their discretion refer one or more parties to psychologists, accountants or social workers for post-mediation professional assistance. Where mediation is provided by a public agency, referrals are made to other authorities such as Centrelink.

Mediator debriefing

In some situations, a post-mediation debriefing and feedback session is conducted between co-mediators or between mediators and supervisors. It involves a reflective analysis and evaluation of the process. In many community mediation services debriefing is compulsory and mediators are paid for the debriefing session.

Mediator roles and functions

Mediator functions are classified into a few general categories, each of which necessitates a range of specific interventions and techniques in carrying out a general function.

Creating favorable conditions for the parties' decision-making

Mediators can contribute to the settlement of disputes by creating favorable conditions for dealing with them. This can occur through:

- Providing an appropriate physical environment- this is through selection of neutral venues, appropriate seating arrangements, visual aids and security.
- Providing a procedural framework- this is through conduct of the various stages of mediation process. As the chair of the proceedings, they can establish basic ground rules, provide order, sequence and continuity. The mediators opening statement provides an opportunity to establish a structural framework, including the mediation guidelines on which the process will be based.
- Improving the emotional environment- this is a more subtle function and varies among mediations and mediators. They can improve the emotional environment through restricting pressure, aggression and intimidation in the conference room by providing a sense of neutrality and by reducing anxiety among parties.

Assisting the parties to communicate

People in conflict tend not to communicate effectively and poor communication can cause disputes to occur or escalate. For mediators to encourage communication efficiently, they themselves must be good communicators and practice good speaking and listening skills, pay attention to non-verbal messages and other signals emanating from the context of the mediation.

Facilitating the parties' negotiations

Mediators can contribute expertise and experience in all models and styles of negotiation so that the parties are able to negotiate more constructively, efficiently and productively. This function is prominent after the problem-defining stages of mediation and involves mediators bringing direction and finesse to the negotiation efforts of the parties. Mediators can also act as catalysts for creative problem solving, for example by brainstorming or referring to settlement options generated in analogous mediation experiences.

Functions of the parties

the functions of the parties will vary according to their motivations and skills, the role of legal advisers, the model of mediation, the style of mediator and the culture in which the mediation takes place. Legal requirements may also affect their roles. In New South Wales the Law Society has published *A guide to the rights and Responsibilities of participants*.

Preparation

Whether parties enter mediation of their own volition or because legislation obligates them to do so, they prepare for mediation in much the same way they would for negotiations, save that the mediator may supervise and facilitate their preparation. Mediators may require parties to provide position statements, valuation reports and risk assessment analysis. The parties may also be required to consent to an agreement to mediate before preparatory activities commence.

Disclosure of information

Agreements to mediate, mediation rules, and court-based referral orders may have requirements for the disclosure of information by the parties and mediators may have express or implied powers to direct them to produce documents, reports and other material. In court referred mediations parties usually exchange with each other all material which would be available through discovery or disclosure rules were the matter to proceed to hearing. This would include witness statements, valuations and statement accounts.

Party participation

The objectives of mediation, and its emphasis on consensual outcomes, imply a direct input from the parties themselves. The mediation system will expect that parties attend and participate in the mediation meeting; and some mediation rules require a party, if a natural person, to attend in person. However, the process assesses party participation in overall terms, so a party failing to participate in the initial stages may make up for this later in the process.

Choice of mediator

The choice of mediation as a dispute resolution option links closely to the identity of a mediator who conducts it.[. This follows from the circumstances: different models of mediation exist, mediators have a lot of discretion in a flexible procedure, and the mediator's professional background and personal style have enormous potential impacts on the nature of the service provided. These factors make the selection of mediators of real practical significance.

The term "choice of mediator" implies a process of deliberation and decision-making. No formal mechanism for objecting to the appointment of particular mediators exists, but in practice the parties could ask mediators to withdraw for reasons of conflict of interest. In community mediation programs the director generally assigns mediators without party involvement. In New South Wales, for example, when the parties cannot agree on the identity of a mediator the registrar contacts a nominating entity, such as the Bar Association which supplies the name of a qualified and experienced mediator. The following are useful ways of selecting a mediator:

- Personal Attributes - qualities and characteristics which are innate, as opposed to skills and techniques which can be learned and developed. In this concept a number of desirable attributes for mediators include interpersonal skills, patience, empathy, intelligence, optimism and flexibility.
- Mediation qualifications, experience and background - while some jurisdictions prescribe no generalized qualifications for mediators, in some specific contexts mediators require qualifications prescribed by legislation. In New South Wales, for example, the Family Law Act 1975 (Cth) proscribes qualifications for mediators. Qualifications usually revolve around knowledge of the theory and practice of conflict, negotiation and mediation, mediations skills, and attitudes appropriate for mediation. There are three factors of relevance: experience in practice of mediation, experience in the substantive area of dispute, and personal life experience.
- the mediator's training
- the mediator's professional background
- the mediator's certification and its value
- the mediation model offered, and whether it suits the case
- any conflict of interest the mediator may have
- the mediator's willingness to allow, and possibly encourage, mediation participants to seek creative solutions the mediator's fee

Values of mediation

Mediation contains three aspects: feature, values and objectives. The three aspects, although different, can and do at times overlap in their meaning and use. There are a number of values of mediation including Non Adversarialism, Responsiveness and Self Determination and Party Autonomy.

Each Person, Mediator and Process has values that can be attributed to them. These values are as diverse as Human Nature itself and as such provides for no uniformity amongst the values and on how those values are enforced by each party.

The Non-adversarialism value of mediation is not based on the attitudes of the parties involved, but is based on the actual process of mediation and how it is carried out. To clarify the context of the meaning it is said that Litigation is adversarial as its process must come to a logical conclusion based on a decision made by a presiding judge. Mediation does not always end with a decision.

Responsiveness, another value of mediation, responds to the interests of the parties without the restrictions of the law. It allows the parties to come to their own decisions on what is best for them at the time. Responsiveness shows how the mediation process is informal, flexible and collaborative and is person centered.

Self-determination and party autonomy gives rise to parties gaining the ability to make their own choices on what they will agree on. It gives the parties the ability to negotiate with each other to satisfy their interests, generate some options which could lead to an outcome satisfactory to both parties. This autonomy or independent structure provided by the mediation process removes the need for the presence of professional bodies and turns the responsibility back on to the parties to deal with the issue and hopefully to a satisfactory conclusion.

Mediation with arbitration

Mediation has sometimes been utilized to good effect when coupled with arbitration, particularly binding arbitration, in a process called 'mediation/arbitration'. In this process, if parties are unable to reach resolution through mediation, the mediator becomes an arbitrator, shifting the mediation process into an arbitral one, seeking additional evidence as needed (particularly from witnesses, if any, since witnesses are normally not called upon by a mediator), and finally rendering an arbitral decision.

This process is more appropriate in civil matters where rules of evidence or jurisdiction are not in dispute. It resembles, in some respects, criminal plea-bargaining and Confucian judicial procedure, wherein the judge also plays the role of prosecutor - rendering what, in Western European court procedures, would be considered an arbitral (even 'arbitrary') decision.

Mediation/arbitration hybrids can pose significant ethical and process problems for mediators. Many of the options and successes of mediation relate to the mediator's unique role as someone who wields coercive power over neither the parties nor the outcome. If parties in a mediation are aware the mediator might later need to act in the role of judge, the process could be dramatically distorted. Thankfully, mediation-arbitration often involves using different individuals in the role of mediator and (if needed later) arbitrator, but this is not always the case.

Mediator liability

Mediators should take necessary precautions to protect themselves, as they are putting themselves in a vulnerable position in terms of liability. Mediators need to be qualified and properly trained before they can mediate a legally binding mediation. In mediation, there are a number of situations in which liability could arise. For example, a mediator could be liable for misleading parties about the process and/or process of alternative dispute resolution. If a mediator inappropriately recommends mediation as a dispute resolution method, those involved can hold the mediator liable. A breach of confidentiality on the mediators behalf could result in liability. These situations can all lead to court proceedings, although this is quite uncommon. Only one case has been recorded in Australia so far.

Three areas exist in which liability can arise for the mediator:

1. Liability in Contract
2. Liability in Tort

3. Liability for Breach of Fiduciary Obligations.

Liability in Contract arises if the Mediator breaches contract between themselves and one or both of the parties. This can be in written or verbal contract. There are two forms of breach - failure to perform and anticipatory breach. The latter is harder to prove because the breach has not yet happened. If the breach is proven in can result in damages awarded. The damages awarded are generally compensatory in nature, very rarely pecuniary. Limitations on liability include causation (Proving liability requires a showing of actual causation).

Liability in Tort arises if a mediator influences a party in any way (compromising the integrity of the decision), defames a party, breaches confidentiality, or most commonly, is liable in negligence. To be awarded damages, the party must show suffering of actual damage, and must show that the mediator's actions (and not the party's actions) are the actual cause of the damage.

Liability for Breach of Fiduciary Obligations can occur if parties misconceive their relationship with the Mediator for something other than completely neutral. The mediator has the role of remaining neutral at all times, but the parties could misinterpret the relationship to be a fiduciary one.

Mediators' liability in Tapoohi v Lewenberg (Australia)

Tapoohi v Lewenberg provides the only case in Australia to date that has set a precedent for mediators' liability.

The case involved two sisters who settled a deceased estate via mediation. Only one sister attended the mediation in person: the other participated via telephone with her lawyers present. A deal was struck up and an agreement was executed by the parties. At the time it was orally expressed that before the final settlement was to occur there was requirement for taxation advise to be sought as such a large transfer of property would encompass some capital gains tax to be paid.

Tapoohi had to pay Lewenberg $1.4 million dollars in exchange for some transfers of land. One year later, when the capital gains tax was recognized by Tapoohi she filed proceedings against her sister, lawyers and the mediator based on the fact that the agreement was subject to further advise being sought in relation to taxation.

The mediator's agreement stage took place verbally without any formal agreement: only a letter stating his appointment. Tapoohi, a lawyer herself, alleged that the mediator breached his contractual duty, bearing in mind the lack of any formal agreement; and further alleged several breaches on his tortuous duty of care.

Although the court dismissed the summary judgment, the case shows that the mediators owe a duty of care to all parties and that parties can hold them liable should they breach that duty of care. Habersberger J held that it "not beyond argument" that the mediator could be in breach of contractual and tortious duties. Such claims were required to be made out at a hearing but a trial court

This case emphasizes the need for formal mediation-agreements including clauses that would limit mediators' liability.

Mediation in the United States

Note the differences between the legal definition of civil mediation in the United States of America and mediation in other countries. Compared with the situation elsewhere, mediation appears more "professionalized" in the United States] where State laws regarding the use of lawyers as opposed to mediators may differ widely. One can best understand these differences in a more global context of variances between countries.

Within the United States, the laws governing mediation vary greatly on a state-by-state basis. Some states have fairly sophisticated laws concerning mediation, including clear expectations for certification, ethical standards, and protections preserving the confidential nature of mediation by ensuring that mediators need not testify in a case they've worked on. However, even in states that have such developed laws around mediation, that law only relates to mediators working within the court system. Community and commercial mediators practising outside the court system may very well not have these same sorts of legal protections.

Professional mediators often consider the option of liability insurance — traditionally marketed through professional dispute-resolution organizations.

Without-prejudice privilege

The without-prejudice privilege in common law terms denotes that when in honest attempts to reach some type of settlement any offers or admissions cannot be used in a court of law when the subject matter is the same. This further applies to negotiations that are made as part of the mediation process. There are however some exceptions to the without privilege rule.

The without prejudice privilege emerges clearly from the description of the case *AWA Ltd v Daniels* (t/as Deloitte Haskins and Sells). *AWA Ltd* commenced proceedings in the Supreme Court of NSW against *Daniels* for failing to audit their accounts properly. Mediation was ordered and failed. But during the mediation *AWA Ltd* disclosed that they had a document that gave its directors full indemnity with respect to any legal proceedings. *AWA Ltd* was under the impression that they gave this information without prejudice and therefore it could not be used in a court of law. When mediation failed litigation resumed.

During the litigation *Daniels* asked for a copy of the indemnity deed. *AWA Ltd* claimed privilege, but the presiding **Rolfe J**, stated that privilege was not applicable as the document was admissible. Further to this **Rolfe, J** added that *Daniels* was “only seeking to prove a fact which was referred to in the mediation”.

The without-prejudice privilege does not apply if it has been excluded by either party or if the rights to the privilege has been waived in proceedings and it must be remembered that although a mediation is private and confidential, the disclosure of privileged information in the presence of a mediator does not represent a waiver of the privilege.

Mediation in politics and in diplomacy

Diplomats typically engage in mediation as one of their most important activities. Some people consider that it should be a relevant quality of democratic politicians, given that usually in both these fields the explicitation of the respective mansions (on a formal basis, at least) require the achievement of agreements between separate entities of which the diplomat or the politician are third parties by definition; Hobbes and Bodin found that the organs of a state have a mediating power and function.

These activities are usually performed in order to get, on the subjective point of view of this mediator, a recompense that might be in the form of a direct economical advantage, a political advantage, an increased international prestige or influence.

One of many non-violent methods of dispute resolution

In politics and in diplomacy, mediation obviously offers a non-violent method of dispute resolution (some indeed argue that other methods would be many), although it is usually assumed or included in definitions of other methods.

Some theorists, notably Rushworth Kidder, have claimed that mediation is the foundation of a new (some say 'postmodern') ethics - and that it sidesteps traditional ethical issues with pre-defined limits of morality.

Othersclaim that mediation is a form of harms reduction or de-escalation, especially in its large-scale application in peace process and similar negotiation, or the bottom-up way it is performed in the peace movement where it is often called mindful mediation. In this form, it would be derived from methods of Quakers in particular.

Mediation and industrial relations

According to Boulle (2005, p. 286), conciliation and ADR began in industrial relations in Australia long before the arrival of the modern ADR movement. One of the first statutes passed by the Commonwealth parliament was the Conciliation and Arbitration Act 1904 (Cth). This allowed the Federal Government to pass laws on conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one state. In Australian industrial relations, conciliation has been the most prominently used form of ADR, and is generally far removed from modern mediation.

Significant changes in state policy concerning Australian industrial relations took place over the decade 1996 to 2007. The Howard government, with the introduction of the Workplace Relations Act 1996 (Cth), sought to shift the industrial system away from a collectivist approach, where unions and the AIRC had strong roles, to a more decentralized system of individual bargaining between employers and employees (Bamber et al., 2000, p. 43). The WRA Act 1996 (Cth) diminished the traditional role of the AIRC by placing the responsibility of resolving disputes at the enterprise level (Boulle, 2005, p. 287). This allowed mediation to be used to resolve industrial relations disputes instead of the traditionally used conciliation.

The new ‘Work Choices’ Amendment came into effect in March 2006, and included a compulsory model dispute-resolution process that doesn’t involve the AIRC. Mediation and other ADR processes have been encouraged by the government as a better option than the services provided by the AIRC. The government has realized the benefits of mediation to include the following (Van Gramberg, 2006, p. 11):

- Mediation is cost saving
- Avoids polarization of parties
- Is educative
- Probes wider issues than the formal court system
- Provides greater access to justice
- Gives disputants more control over the dispute process

The workplace and mediation

Mediation emerged on the industrial relations landscape in the late 1980s due to a number of economic and political factors, which then induced managerial initiatives. According to Van Gramberg (2006, p. 173) these changes have come from the implementation of human resource management policies and practices, which focuses on the individual worker, and rejects all other third parties such as unions, and the Australian Industrial relations Commission (AIRC). HRM together with the political and economic changes undertaken by the Howard government has created an environment where private ADR can be fostered in the workplace (Bamber et al., 2000, p. 45). The decline of unionism and the encouragement of individualization in the workplace have encouraged the growth of private mediations. This is demonstrated in the industries with the lowest union rates such as in the private business sector having the greatest growth of mediation (Van Gramberg, 2006, p. 174).

The Howard government's Work Choices Act, which came into effect on March 2006, made further legislative changes to deregulate the industrial relations system. A key element of the new changes was to weaken the powers of the AIRC in conciliation and arbitration by installing and encouraging private mediation in competition with the services provided by the AIRC.

Workplace conflicts can cover a great variety of disputes. For example disputes between staff members, allegations of harassment, contractual disputes relating to the terms and conditions of employment and workers-compensation claims (Boulle, 2005, p. 298). At large, workplace disputes are between people who have an ongoing working relationship within a closed system, which indicate that mediation would be appropriate as a means of a dispute resolution process. However in organisations there are many complex relationships, involving hierarchy, job security and competitiveness that make mediation a difficult task (Boulle, 2005, p. 298).

Conflict-management

Society perceives conflict as something that gets in the way of progress, as a negative symptom of a relationship that one should cure as quickly as possible (Boulle, 2005, p. 87). However within the mediation profession conflict is seen as a fact of life and when properly managed it can have many benefits for the parties and constituents (Bagshaw, 1999, p. 206, Boulle, 2005, p. 87). The benefits of conflict include the opportunity to renew relationships and make positive changes for the future. Mediation should be a productive process, where conflict can be managed and expressed safely (Bradford, 2006, p. 148). It is the mediator's responsibility to let the parties express their emotions entailed in conflict safely. Allowing the parties to express these emotions may seem unhelpful in resolving the dispute, but if managed constructively these emotions may help towards a better relationship between the parties in the future.

Measuring the effectiveness of conflict management

The ADR field has felt a need to define the effectiveness of dispute-resolution in a broad manner, including more than whether there was a settlement (Boulle, 2005, p. 88). Mediation as a field of dispute resolution recognized there was more to measuring effectiveness, than a settlement. Mediation recognised in its own field that party satisfaction of the process and mediator competence could be measured. According to Boulle (2005, p. 88) surveys of those who have participated in mediation reveal strong levels of satisfaction of the process.

Benefits of mediation may include:

- discovering parties' interests and priorities
- healthy venting of emotions in a protected environment
- an agreement to talk about a set agenda
- identifying roles of the constituents, such as relatives and professional advisors
- knowledge of a constructive dispute resolution for use in a future dispute

Confidentiality and mediation

Confidentiality emerges as a powerful and attractive feature of mediation (Van Gramberg, 2006, p. 38). The private and confidential aspect of mediation is in contrast with the courts and tribunals which are open to the public, and kept on record. Privacy is a big motivator for people to choose mediation over the courts or tribunals. Although mediation is promoted with confidentiality being one of the defining features of the process, it is not in reality as private and confidential as often claimed (Boulle, 2005, p. 539). In some circumstances the parties agree that the mediation should not be private and confidential in parts or in whole. Concerning the law there are limits to privacy and confidentiality, for example if their mediation entails abuse allegations, the mediator must disclose this information to the authorities. Also the more parties in a mediation the less likely it will be to maintain all the information as confidential. For example some parties may be required to give an account of the mediation to outside constituents or authorities (Boulle, 2005, p. 539).

Two competing principles affect the confidentiality of mediations. One principle involves upholding confidentiality as means to encourage people to settle out of the courts and avoid litigation, while the second principle states that all related facts in the mediation should be available to the courts.

A number of reasons exist for keeping mediation private and confidential; these include:

- it makes the mediation appealing
- it provides a safe environment to disclose information and emotions
- confidentiality makes mediation more effective by making parties talk realistically
- confidentiality upholds mediators' reputations, as it reinforces impartiality
- confidentiality makes agreement more final, as there is little room to seek review

Global relevance

The rise of international trade law, continental trading blocs, the World Trade Organization (and its opposing anti-globalization movement), and use of the Internet, among other factors, seem to suggest that legal complexity has started to reach an intolerable and undesirable point. There may be no obvious way to determine which jurisdiction has precedence over which other, and there may be substantial resistance to settling a matter in any one place.

Accordingly, mediation may come into more widespread use, replacing formal legal and judicial processes sanctified by nation-states. Some people, like members of the anti-globalization movement, believe such formal processes have quite thoroughly failed to provide real safety and closure guarantees that are pre-requisite to uniform rule of law.

Following an increasing awareness of the process, and a wider notion of its main aspects and eventual effects, some commentators in recent times have frequently proposed mediation for the resolution of international disputes, with attention to belligerent situations too.

However, as mediation ordinarily needs participation by the interested parties and it would be very difficult to impose it, in case one of the parts refuses this process it cannot be a solution.

Fairness

As noted, mediation can only take place in an atmosphere where there is some agreement on safety, fairness and closure, usually provided by nation-states and their legal systems. But increasingly, disputes transcend international borders and include many parties who may be in unequal-power relationships.

In such circumstances, with many parties afraid to be identified or to make formal complaints, terminology or rules of standing or evidence slanted against some groups, and without power to enforce even "legally binding" contracts, some conclude that the process of mediation would not reasonably be said to be "fair".

Accordingly, even when a party offers to mediate and a mediator attempts to make the process fair, mediation itself might not operate as a fair process. In such cases, parties may pursue other means of dispute resolution.

From a more technical point of view, however, one must recall that the parties must require mediation, and very seldom can it be imposed by "non-parties" upon the parties. Therefore, in presence of entities that cannot be clearly identified, and that practically don't claim for their recognition as "parties", the professional experience of a mediator could only apply to a proposal of definition, that besides would always miss the constitutional elements of a mediation. Moreover, in such circumstances, the counter-party of these eventual entities would very likely deny any prestige of 'party' to the opponent, this not consenting any kind of treaty (in a correct mediation).

More generally, given that mediation ordinarily produces agreements containing elements to enforce the pacts with facts that can grant its effectiveness, note that other mechanisms apart from legal systems may ensure protection of the pacts: modern mediation frequently tends to define economic compensations and warranties too, generally considered quicker and more effective. The concrete 'power' of an agreement is classically found in the *equilibre* of the pact, in the sincere conciliation of respective interests and in the inclusion of measures that would make the rupture of the pact very little convenient for the unfaithful party. Pacts that don't have such sufficient warranties are only academically effects of a mediation, but would never respect the deontology of the mediator.

Phoenix Coyotes

On May 19, 2009 a bankruptcy judge ordered the NHL and Phoenix Coyotes owner Jerry Moyes to mediation in an attempt to resolve their fight over who is in control of a franchise that both sides agree is insolvent.

Judge Redfield Baum made the ruling after hearing arguments from attorneys on both sides in U.S. bankruptcy court Tuesday over the NHL's contention that Moyes had no authority to file Chapter 11 bankruptcy earlier this month.

The league and Moyes are to report their progress at a status hearing May 27. Meanwhile, Baum said to relocate the team anywhere must be decided before the franchise is sold.

Conflict management style

A **conflict management style** is the pattern of behaviour an individual develops in response to conflict with others such as differences of opinion. Conflict management styles tend to be consistent over time.[*citation needed*] Conflict management is the skill needed to resolve different situations.

Development

The field of conflict management, conflict resolution, or conflict transformation (there is a lack of consensus in naming convention[*citation needed*]) has since the 1970's sought to teach people to be more conscious of their conflict management style. The premise behind this is that greater awareness of their style by individuals enables them to make better choices of how to respond. Someone who knows they have a tendency to avoid conflict, for example, might in some circumstances choose a different and perhaps more appropriate response.

Application

The most widely used tool for this is a conflict style inventory, typically a short questionnaire filled out by a user, with interpretation of the scores given in writing or by an instructor. The point is not to categorize the user, but rather to give him or her a framework in which to assess responses and options. Conflict style inventories in wide use today include the Thomas Kilmann and Style Matters: The Kraybill Conflict Style Inventory

Diplomacy.

Diplomacy is the art and practice of conducting negotiations between representatives of groups or states. It usually refers to international diplomacy, the conduct of international relations through the intercession of professional diplomats with regard to issues of peace-making, trade, war, economics and culture. International treaties are usually negotiated by diplomats prior to endorsement by national politicians.

In an informal or social sense, diplomacy is the employment of tact to gain strategic advantage or to find mutually acceptable solutions to a common challenge, one set of tools being the phrasing of statements in a non-confrontational, or polite manner.

Origin of the word

The word stems from the Greek word "*diploma*", which literally means 'folded in two'. In ancient Greece, a diploma was a certificate certifying completion of a course of study, typically folded in two. In the days of the Roman Empire, the word "*diploma*" was used to describe official travel documents, such as passports and passes for imperial roads, that were stamped on double metal plates. Later, the meaning was extended to cover other official documents such as treaties with foreign tribes. In the 1700s the French called their body of officials attached to foreign legations the corps "*diplomatique*". The word "*diplomacy*" was first introduced into the English language by Edmund Burke in 1796, based on the French word "*diploma tie*".

The science of diplomatics, dealing with the study of old documents, also ows its name to the above, but its present meaning is completely distinct from that of diplomacy.

Diplomats and diplomatic missions

The collective term for a group of diplomats from a single country who reside in another country is a diplomatic mission. Ambassador is the most senior diplomatic rank; a diplomatic mission headed by an ambassador is known as an embassy, with the exception of permanent missions at the United Nations, the Organization of American States, or other multilateral organizations, which are also headed by ambassadors. The collective body of all diplomats of particular country is called that country's diplomatic service. The collective body of all diplomats assigned to a particular country is the diplomatic corps. (See also diplomatic rank.)

History

Ancient Egypt, Canaan, and Hittite Empire

Some of the earliest known diplomatic records are the Amarna letters written between the pharaohs of the Eighteenth dynasty of Egypt and the Amurru rulers of Canaan during the 14th century BC. Following the Battle of Kadesh in *c*. 1274 BC during the Nineteenth dynasty, the pharaoh of Egypt and ruler of the Hittite Empire created one of the first known international peace treaties which survives in stone tablet fragments.

Classical Greece

The Greek City States on some occasions sent envoys to each other in order to negotiate specific issues, such as war and peace or commercial relations, but did not have diplomatic representatives regularly posted in each other's territory. However, some of the functions given to modern diplomatic representatives were in Classical Greece filled by a proxenos, who was a citizen of the host city having a particular relations of friendship with another city – a relationship often hereditary in a particular family.

Europe

Ancient roots

The ability to practice diplomacy is one of the defining elements of a state. As noted above, diplomacy has been practiced since the first city-states were formed millennia ago in ancient Greece. For most of human history diplomats were sent only for specific negotiations, and would return immediately after their mission concluded. Diplomats were usually relatives of the ruling family or of very high rank in order to give them legitimacy when they sought to negotiate with the other state.

One notable exception involved the relationship between the Pope and the Byzantine Emperor; papal agents, called *apocrisiarii*, were permanently resident in Constantinople. After the 8th century, however, conflicts between the Pope and Emperor (such as the Iconoclastic controversy) led to the breaking of close ties.

The origins of diplomacy lie in the strategic and competitive exchange of impressive gifts, which may be traced to the Bronze Age and recognized as an aspect of Homeric guest-friendship.Thus diplomacy and trade have been inexorably linked from the outset. "In the framework of diplomatic relations it was customary for Byzantine emperors and Muslim rulers, especially the 'Abbāsids and the Fātimids, as well as for Muslim rulers between themselves, to exchange precious gifts, with which they attempted to impress or surpass their counterparts," remarks David Jacoby, in the context of the economics of silk in cultural exchange among Byzantium, Islam and the Latin West: merchants accompanied

emissaries, who often traveled on commercial ships. At a later date, it will be recalled that the English adventurer and trader Anthony Sherley convinced the Persian ruler to send the first Persian embassy to Europe (1599–1602).

Roots of modern diplomacy

Early modern diplomacy's origins are often traced to the states of Northern Italy in the early Renaissance, with the first embassies being established in the thirteenth century. Milan played a leading role, especially under Francesco Sforza who established permanent embassies to the other city states of Northern Italy. Tuscany and Venice were also flourishing centres of diplomacy from the 1300s onwards. It was in the Italian Peninsula that many of the traditions of modern diplomacy began, such as the presentation of an ambassador's credentials to the head of state.

From Italy the practice was spread to other European regions. Milan was the first to send a representative to the court of France in 1455. However, Milan refused to host French representatives fearing espionage and that the French representatives would intervene in its internal affairs. As foreign powers such as France and Spain became increasingly involved in Italian politics the need to accept emissaries was recognized. Soon the major European powers were exchanging representatives. Spain was the first to send a permanent representative; it appointed an ambassador to the Court of England in 1487. By the late 16th century, permanent missions became customary. The Holy Roman Emperor, however, did not regularly send permanent legates, as they could not represent the interests of all the German princes (who were in theory all subordinate to the Emperor, but in practice each independent).

During that period the rules of modern diplomacy were further developed. The top rank of representatives was an ambassador. At that time an ambassador was a nobleman, the rank of the noble assigned varying with the prestige of the country he was delegated to. Strict standards developed for ambassadors, requiring they have large residences, host lavish parties, and play an important role in the court life of their host nation. In Rome, the most prized posting for a Catholic ambassador, the French and Spanish representatives would have a retinue of up to a hundred. Even in smaller posts, ambassadors were very expensive. Smaller states would send and receive envoys, who were a rung below ambassador. Somewhere between the two was the position of minister plenipotentiary.

Diplomacy was a complex affair, even more so than now. The ambassadors from each state were ranked by complex levels of precedence that were much disputed. States were normally ranked by the title of the sovereign; for Catholic nations the emissary from the Vatican was paramount, then those from the kingdoms, then those from duchies and principalities. Representatives from republics were ranked the lowest (which often angered the leaders of the numerous German, Scandinavian and Italian republics). Determining precedence between two kingdoms depended on a number of factors that often fluctuated, leading to near-constant squabbling.

French diplomat Charles Maurice de Talleyrand-Périgord is considered one of the most skilled diplomats of all time.

Ambassadors, nobles with little foreign experience and no expectation of a career in diplomacy, needed to be supported by large embassy staff. These professionals would be sent on longer assignments and would be far more knowledgeable than the higher-ranking officials about the host country. Embassy staff would include a wide range of employees,

including some dedicated to espionage. The need for skilled individuals to staff embassies was met by the graduates of universities, and this led to a great increase in the study of international law, modern languages, and history at universities throughout Europe.

At the same time, permanent foreign ministries began to be established in almost all European states to coordinate embassies and their staffs. These ministries were still far from their modern form, and many of them had extraneous internal responsibilities. Britain had two departments with frequently overlapping powers until 1782. They were also far smaller than they are currently. France, which boasted the largest foreign affairs department, had only some 70 full-time employees in the 1780s.

The elements of modern diplomacy slowly spread to Eastern Europe and Russia, arriving by the early eighteenth century. The entire edifice would be greatly disrupted by the French Revolution and the subsequent years of warfare. The revolution would see commoners take over the diplomacy of the French state, and of those conquered by revolutionary armies. Ranks of precedence were abolished. Napoleon also refused to acknowledge diplomatic immunity, imprisoning several British diplomats accused of scheming against France.

After the fall of Napoleon, the Congress of Vienna of 1815 established an international system of diplomatic rank. Disputes on precedence among nations (and therefore the appropriate diplomatic ranks used) persisted for over a century until after World War II, when the rank of ambassador became the norm. In between that time, figures such as the German Chancellor Otto von Bismark were renowned for international diplomacy.

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[Ancient India

Ancient India, with its kingdoms and dynasties, had a long tradition of diplomacy. The oldest treatise on statecraft and diplomacy, *Arthashastra*, is attributed to Kautilya (also known as Chanakya), who was the principal adviser to Chandragupta Maurya, the founder of the Maurya dynasty who ruled in the 3rd century BC, (whose capital was Patliputra, today's Patna, the chief city of Bihar state). *Arthashastra* is a complete work on the art of kingship, with long chapters on taxation and on the raising and maintenance of armies. It also incorporates a theory of diplomacy, of how in a situation of mutually contesting kingdoms, the wise king build alliances and tries to checkmate his adversaries. The envoys sent at the time to the courts of other kingdoms tended to reside for extended periods of time, and *Arthashastra* contains advice on the deportment of the envoy, including the trenchant suggestion that 'he should sleep alone'. The highest morality for the king is that his kingdom should prosper.

China

Foreign relations of Imperial China

One of the earliest realists in international relations theory was the 6th century BC military strategist Sun Tzu (d. 496 BC), author of *The Art of War*. He lived during a time in which rival states were starting to pay less attention to traditional respects of tutelage to the Zhou Dynasty (c. 1050–256 BC) figurehead monarchs while each vied for power and total conquest. However, a great deal of diplomacy in establishing allies, bartering land, and signing peace treaties was necessary for each warring state.

From the Battle of Baideng (200 BC) to the Battle of Mayi (133 BC), the Han Dynasty was forced to uphold a marriage alliance and pay an exorbitant amount of tribute (in silk, cloth, grain, and other foodstuffs) to the powerful northern nomadic Xingu that had been consolidated by Modu Shanyu. After the Xiongnu sent word to Emperor Wen of Han (r. 180–157) that they controlled areas stretching from Manchuria to the Tarim Basin oasis city-states, a treaty was drafted in 162 BC proclaiming that everything north of the Great Wall belong to nomads' lands, while everything south of it would be reserved for Han Chinese. The treaty was renewed no less than nine times, but did not restrain some Xiongnu *tuqi* from raiding Han borders. That was until the far-flung campaigns of Emperor Wu of Han (r. 141–87 BC) which shattered the unity of the Xiongnu and allowed Han to conquer the Western Regions; under Wu, in 104 BC the Han armies ventured as far Fergana in Central Asia to battle the Yuezhi who had conquered Hellenistic Greek areas.

Portraits of Periodical Offering, a 6th century Chinese painting portraying various emissaries; ambassadors depicted in the painting ranging from those of Hephthalites, Persia to Langkasuka, Baekje(part of the modern Korea), Qiuci, and Wo (Japan).

The Koreans and Japanese during the Chinese Tang Dynasty (618–907 AD) looked to the Chinese capital of Chang'an as the hub of civilization and emulated its central bureaucracy as the model of governance. The Japanese sent frequent embassies to China in this period, although they halted these trips in 894 during the Tang's imminent collapse. After the devastating An Shi Rebellion from 755 to 763, the Tang Dynasty was in no position to reconquer Central Asia and the Tarim Basin. After several conflicts with the Tibetan Empire spanning several different decades, the Tang finally made a truce and signed a peace treaty with them in 841.

In the 11th century during the Song Dynasty (960–1279), there were cunning ambassadors such as Shen Kuo and Su Song who achieved diplomatic success with the Liao Dynasty, the often hostile Khitan neighbor to the north. Both diplomats secured the rightful borders of the Song Dynasty through knowledge of cartography and dredging up old court archives. There was also a triad of warfare and diplomacy between these two states and the Tangut Western Xia Dynasty to the northwest of Song China (centered in modern-day Shaanxi). After warring with the Lý Dynasty of Vietnam from 1075 to 1077, Song and Lý made a peace agreement in 1082 to exchange the respective lands they had captured from each other during the war.

Long before the Tang and Song dynasties, the Chinese had sent envoys into Central Asia, India, and Persia starting with Zhang Qian in the 2nd century BC. Another notable event in Chinese diplomacy was the Chinese embassy mission of Zhou Daguan to the Khmer Empire of Cambodia in the 13th century. Chinese diplomacy was a necessity in the distinctive period of Chinese exploration. Since the Tang Dynasty (618–907 AD), the Chinese also became heavily invested in sending diplomatic envoys abroad on maritime missions into the Indian Ocean, to India, Persia, Arabia, East Africa, and Egypt. Chinese maritime activity was increased dramatically during the commercialized period of the Song Dynasty, with new nautical technologies, many more private ship owners, and an increasing amount of economic investors in overseas ventures.

During the Mongol Empire (1206–1294) the Mongols created something similar to today's diplomatic passport called paiza. The paiza were in three different types (golden, silver, and copper) depending on the envoy's level of importance. With the paiza, there came authority that the envoy can ask for food, transport, place to stay from any city, village, or clan within the empire with no difficulties.

Since the 17th century, there was a series of treaties upheld by Qing Dynasty China and Czarist Russia, beginning with the Treaty of Nerchinsk in the year 1689. This was followed up by the Aigun Treaty and the Convention of Peking in the mid 19th century.

As European power spread around the world in the eighteenth and nineteenth centuries so too did its diplomatic model and system become adopted by Asian countries.

Modern era

Diplomatic relations within the Early Modern era of Asia were depicted as an environment of prestige and Status. It was maintained that one must be of noble ancestry in order to represent an autonomous state within the international arena.[6] Therefore the position of diplomat was often revered as an element of the elitist class within Asia. A state's ability to practice diplomacy has been one of the underlying defining characteristics of an autonomous state. It is this practice that has been employed since the conception of the first city-states within the international spectrum. Diplomats in Asia were originally sent only for the purpose of negotiation. They would be required to immediately return after their task was completed. The majority of diplomats initially constituted the relatives of the ruling family. A high rank was bestowed upon them in order to present a sense of legitimacy with regards to their presence. Italy, the Ottoman Empire, and China were the first real states that perpetuated environments of diplomacy. During the early modern era diplomacy evolved to become a crucial element of international relations within the Mediterranean and Asia.

Ottoman Empire

Diplomatic traditions outside of Europe differed greatly. A feature necessary for diplomacy is the existence of a number of states of somewhat equal power, as existed in Italy during the Renaissance, and in Europe for much of the modern period. By contrast, in Asia and the Middle East, China and the Ottoman Empire were reluctant to practice bilateral diplomacy as they viewed themselves to be unquestionably superior to all their neighbours (hence, set up smaller nations as tributaries and vassals). The Ottoman Turks, for instance, would not send missions to other states, expecting representatives to come to Istanbul. It would not be until the nineteenth century that the Ottoman Empire established permanent embassies in other capitals.

Relations with the government of the Ottoman Empire (known as the Sublime Porte) were particularly important to Italian states. The maritime republics of Genoa and Venice depended less and less upon their nautical capabilities, and more and more upon the perpetuation of good relations with the Ottomans. Interactions between various merchants, diplomats, and religious men between the Italian and Ottoman empires helped inaugurate and create new forms of diplomacy and statecraft. Eventually the primary purpose of a diplomat, which was originally a negotiator, evolved into a persona that represented an autonomous state in all aspects of political affairs. It became evident that all other sovereigns felt the need to accommodate themselves diplomatically, due to the emergence of the powerful political environment of the Ottoman Empire. One could come to the conclusion that the atmosphere of diplomacy within the early modern period revolved around a foundation of conformity to Ottoman culture.

Italy

The origins of modern diplomacy within the international spectrum of politics, could often be traced back to the states of Northern Italy. This was during the early renaissance, where the

first diplomatic embassies were established in the thirteenth century. The state of Milan played an incredible part in the establishment of permanent embassies within the city states of Northern Italy. Various diplomatic traditions were also conceived within Italy. The presentation of an Ambassador's credentials and acknowledgments are elements that were inaugurated in Italian early modern diplomacy.

The practice of diplomacy and its various intricacies were also spread to various other autonomous European states. Milan created the first diplomatic international gesture in 1455, by sending a representative to the court of France. It was extremely controversial however, that they would not accept the same gesture from France, due to the fears of espionage and intervention in internal affairs. It had eventually become evident that as super powers such as France and Spain grew in size and strength, and there was an overarching necessity to accept any form of diplomatic effort within the international arena. Eventually Italy paved the way for all European power to exchange representatives. By the late 16th century, permanent emissaries were standard practice.

Diplomatic strategy

Real world diplomatic negotiations are very different from intellectual debates in a university where an issue is decided on the merit of the arguments and negotiators make a deal by splitting the difference. Though diplomatic agreements can sometimes be reached among liberal democratic nations by appealing to higher principles, most real world diplomacy has traditionally been heavily influenced by hard power.

The interaction of strength and diplomacy can be illustrated by a comparison to labor negotiations. If a labor union is not willing to strike, then the union is not going anywhere because management has absolutely no incentive to agree to union demands. On the other hand, if management is not willing to take a strike, then the company will be walked all over by the labor union, and management will be forced to agree to any demand the union makes. The same concept applies to diplomatic negotiations.

There are also incentives in diplomacy to act reasonably, especially if the support of other actors is needed. The gain from winning one negotiation can be much less than the increased hostility from other parts. This is also called soft power.

Many situations in modern diplomacy are also rules based. When for instance two WTO countries have trade disputes, it is in the interest of both to limit the spill over damage to other areas by following some agreed-upon rules.

Diplomatic immunity

Diplomatic immunity

The sanctity of diplomats has long been observed. This sanctity has come to be known as diplomatic immunity. While there have been a number of cases where diplomats have been killed, this is normally viewed as a great breach of honour. Genghis Khan and the Mongols were well known for strongly insisting on the rights of diplomats, and they would often wreak horrific vengeance against any state that violated these rights.

Diplomatic rights were established in the mid-seventeenth century in Europe and have spread throughout the world. These rights were formalized by the 1961 Vienna Convention on Diplomatic Relations, which protects diplomats from being persecuted or prosecuted

while on a diplomatic mission. If a diplomat does commit a serious crime while in a host country he may be declared as persona non grata (unwanted person). Such diplomats are then often tried for the crime in their homeland.

Diplomatic communications are also viewed as sacrosanct, and diplomats have long been allowed to carry documents across borders without being searched. The mechanism for this is the so-called "diplomatic bag" (or, in some countries, the "diplomatic pouch"). While radio and digital communication have become more standard for embassies, diplomatic pouches are still quite common and some countries, including the United States, declare entire shipping containers as diplomatic pouches to bring sensitive material (often building supplies) into a country.

In times of hostility, diplomats are often withdrawn for reasons of personal safety, as well as in some cases when the host country is friendly but there is a perceived threat from internal dissidents. Ambassadors and other diplomats are sometimes recalled temporarily by their home countries as a way to express displeasure with the host country. In both cases, lower-level employees still remain to actually do the business of diplomacy.

Diplomats as a guarantee

In the Ottoman Empire, the diplomats of Persia and other states were seen as a guarantee of good behavior. If a nation broke a treaty or if their nationals misbehaved the diplomats would be punished. Diplomats were thus used as an enforcement mechanism on treaties and international law. To ensure that punishing a diplomat mattered rulers insisted on high-ranking figures. This tradition is seen by supporters of Iran as a legal basis of the 1979 Iranian hostage crisis. In imitation of alleged previous practices supporters of the Iranian Revolution attempted to punish the United States for its alleged misdeeds by holding their diplomats hostage. Diplomats as a guarantee were also employed sometimes in pre-modern Europe and other parts of Asia.

Diplomacy and espionage

Diplomacy is closely linked to espionage or gathering of intelligence. Embassies are bases for both diplomats and spies, and some diplomats are essentially openly-acknowledged spies. For instance, the job of military attachés includes learning as much as possible about the military of the nation to which they are assigned. They do not try to hide this role and, as such, are only invited to events allowed by their hosts, such as military parades or air shows. There are also deep-cover spies operating in many embassies. These individuals are given fake positions at the embassy, but their main task is to illegally gather intelligence, usually by coordinating spy rings of locals or other spies. For the most part, spies operating out of embassies gather little intelligence themselves and their identities tend to be known by the opposition. If discovered, these diplomats can be expelled from an embassy, but for the most part counter-intelligence agencies prefer to keep these agents *in situ* and under close monitoring.

The information gathered by spies plays an increasingly important role in diplomacy. Arms-control treaties would be impossible without the power of reconnaissance satellites and agents to monitor compliance. Information gleaned from espionage is useful in almost all forms of diplomacy, everything from trade agreements to border disputes.

Diplomatic resolution of problems

Various processes and procedures have evolved over time for handling diplomatic issues and disputes.

Arbitration and mediations

Nations sometimes resort to international arbitration when faced with a specific question or point of contention in need of resolution. For most of history, there were no official or formal procedures for such proceedings. They were generally accepted to abide by general principles and protocols related to international law and justice.

Sometimes these took the form of formal arbitrations and mediations. In such cases a commission of diplomats might be convened to hear all sides of an issue, and to come some sort of ruling based on international law.

In the modern era, much of this work is often carried out by the International Court of Justice at the Hague, or other formal commissions, agencies and tribunals, working under the United Nations. Below are some examples.

- Hay-Herbert Treaty Enacted after the United States and Britain submitted a dispute to international mediation about the US-Canadian border.

Conferences

Other times, resolutions were sought through the convening of international conferences. In such cases, there are fewer ground rules, and fewer formal applications of international law. However, participants are expected to guide themselves through principles of international fairness, logic, and protocol.

Some examples of these formal conferences are:

- Congress of Vienna (1815) – After Napoleon was defeated, there were many diplomatic questions waiting to be resolved. This included the shape of the map of Europe, the disposition of political and nationalist claims of various ethnic groups and nationalities wishing to have some political autonomy, and the resolution of various claims by various European powers.

- The Congress of Berlin (June 13 – July 13, 1878) was a meeting of the European Great Powers' and the Ottoman Empire's leading statesmen in Berlin in 1878. In the wake of the Russo-Turkish War, 1877–78, the meeting's aim was to reorganize conditions in the Balkans.

Negotiations

Sometimes nations convene official negotiation processes to settle an issue or dispute between several nations which are parties to a dispute. These are similar to the conferences mentioned above, as there are technically no established rules or procedures. However, there are general principles and precedents which help define a course for such proceedings.

Some examples are

- Camp David accord Convened in 1978 by President Jimmy Carter of the United States, at Camp David to reach an agreement between Prime Minister Mechaem Begin

of Israel and President Anwar Sadat of Egypt. After weeks of negotiation, agreement was reached and the accords were signed, later leading directly to the Israel-Egypt Peace Treaty of 1979.

- Treaty of Portsmouth Enacted after President Theodore Roosevelt brought together the delegates from Russia and Japan, to settle the Russo-Japanese War. Roosevelt's personal intervention settled the conflict, and caused him to win the Nobel peace prize.

Diplomatic recognition

Diplomatic recognition is an important factor in determining whether a nation is an independent state. Receiving recognition is often difficult, even for countries which are fully sovereign. For many decades after its becoming independent, even many of the closest allies of the Dutch Republic refused to grant it full recognition. Today there are a number of independent entities without widespread diplomatic recognition, most notably the Republic of China on Taiwan. Since the 1970s, most nations have stopped officially recognizing the ROC's existence on Taiwan, at the insistence of the People's Republic of China. Currently, the United States and other nations maintain informal relations through de facto embassies, with names such as the American Institute in Taiwan. Similarly, Taiwan's de facto embassies abroad are known by names such as the Taipei Economic and Cultural Representative Office. This was not always the case, with the US maintaining official diplomatic ties with the ROC, recognizing it as the sole and legitimate government of all of China until 1979, when these relations were broken off as a condition for establishing official relations with Communist China.

The Palestinian National Authority has its own diplomatic service, however Palestinian representatives in most Western countries are not accorded diplomatic immunity, and their missions are referred to as Delegations General.

Other unrecognized regions which claim independence include Abkhazia, Transnistria, Somaliland, South Ossetia, Nagorno Karabakh, and the Turkish Republic of Northern Cyprus. Lacking the economic and political importance of Taiwan, these nations tend to be much more diplomatically isolated.

Though used as a factor in judging sovereignty, Article 3 of the Montevideo Convention states, "The political existence of the state is independent of recognition by other states."

Informal diplomacy

Informal diplomacy (sometimes called Track II diplomacy) has been used for centuries to communicate between powers. Most diplomats work to recruit figures in other nations who might be able to give informal access to a country's leadership. In some situations, such as between the United States and the People's Republic of China a large amount of diplomacy is done through semi-formal channels using interlocutors such as academic members of thinktanks. This occurs in situations where governments wish to express intentions or to suggest methods of resolving a diplomatic situation, but do not wish to express a formal position.

Track II diplomacy is a specific kind of informal diplomacy, in which non-officials (academic scholars, retired civil and military officials, public figures, social activists) engage in dialogue, with the aim of conflict resolution, or confidence-building. Sometimes governments

may fund such Track II exchanges. Sometimes the exchanges may have no connection at all with governments, or may even act in defiance of governments; such exchanges are called Track III.

Om some occasion a former holder of an official position continues to carry out an informal diplomatic activity after retirement. In some cases, governments welcome such activity, for example as a means of establishing an initial contact with a hostile state of group without being formally committed. In other cases, however, such informal diplomats seek to promote a political agenda different from that of the government currently in power. Such informal diplomacy is practiced by former US Presidents Jimmy Carter and (to a lesser extent) Bill Clinton and by the former Israeli diplomat and minister Yossi Beilin (see Geneva Initiative).

Paradiplomacy

Paradiplomacy refers to the international relations conducted by subnational, regional, local or non-central governments. The most ordinary case of paradiplomatic relation refer to co-operation between bordering political entities. However, interest of federal states, provinces, regions etc., may extend over to different regions or to issues gathering local governments in multilateral fora worldwide. Some non-central governments may be allowed to negotiate and enter into agreement with foreign central states.

Cultural diplomacy

Cultural diplomacy is a part of diplomacy. It alludes to a new way of making diplomacy by involving new non governmental and non professional actors in the making of diplomacy. In the frame of globalization, culture plays a major role in the definition of identity and in the relations between people. Joseph Nye points out the importance of having a *soft power* besides a *hard power*. When classical diplomacy fails, a better knowledge can help bridging the gap between different cultures. Cultural diplomacy becomes a subject of academic studies based on historical essays on the United States, Europe, and the Cold War.

Small state diplomacy

Small state diplomacy is receiving increasing attention in diplomatic studies and international relations. Small states are particularly affected by developments which are determined beyond their borders such as climate change, water security and shifts in the global economy. Diplomacy is the main vehicle by which small states are able to ensure that their goals are addressed in the global arena. These factors mean that small states have strong incentives to support international cooperation. But with limited resources at their disposal, conducting effective diplomacy poses unique challenges for small states

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- ^ ***a*** ***b*** ***c*** Schellenberg, Parks-Savage & Rehfuss 2007
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AFRICA POPULATION INSTITUTE
INTERNATIONAL TRADE AND TRADE POLICIES
PAPER CODES: **APDIR 201**

1. (a) Discuss the different models used to predict trade patterns
   (b) What are the assumptions of the Ricardian model?
   (c) Explain the risks faced by companies in international trade

2 a, Discuss the policies that can be used to achieve protectionist goals?
b, What are the factors that affect balance of trade
c, Explain the advantages of engaging in International trade.

3. a) Explain the arguments for and against protectionism.
   b) Why have most of the African countries failed to manage their balance of trade?
   c)How can they improve their trade relations

GLOBALISATION DEBATES, EVENTS AND ANALYSIS
PAPER CODES: **APDPH 202**

1. a) Discuss the historical factors provoking economic integration and resistances.
   b) Explain the relevancy/ significance of economic integration
   c) Discuss the effects of globalization on development.

2. a) Explain the different examples of alter-globalization as a movement.
   b) What are the lessons learnt from alter-globalisation as a student of international relations management

3. a) Define the term Non-Governmental Organization (NGO).
   b) Discuss the methods of NGO operations.
   c) “The world is becoming a global village” Discuss

BUSINESS STATISTICS

PAPER CODES: **APD(BA 201, SW 201, LPS 201, PA 201, IR 203, FA 201)**

1. a) With examples explain what is meant by descriptive statistics in relation to what is influential statistics?
   b) Discuss the relevance of statistic when compiling data?

2. a) Name and discuss the different methods of collecting statistical data?
   b) What is the difference between association statistics and correlation statistic?

3 . a) Mention and discuss the different scales used when collecting statistical data?
   b) Using the examples of your choice, calculate the standard deviation, please show all the working

NEGOTIATION AND MEDIATION SKILLS

PAPER CODES: **APDSW 205, APDIR 204**

1. a) How should one handle conflicts in negotiation?
   b) Give different styles of negotiation.
   c) Discuss the importance of negotiation.

2. a) What is the importance of Mediation
   b) Explain the role of a mediator in conflict resolution.
   c) Explain the advantages and disadvantages of arbitration in organization.

3. a) ”Communication is key important in conflict resolution.” Discuss.
   b) What are the hindrances for effective communication?
   c) If you are appointed to lead a team of negotiators, discuss the tactics that you would apply to effectively negotiate a deal!