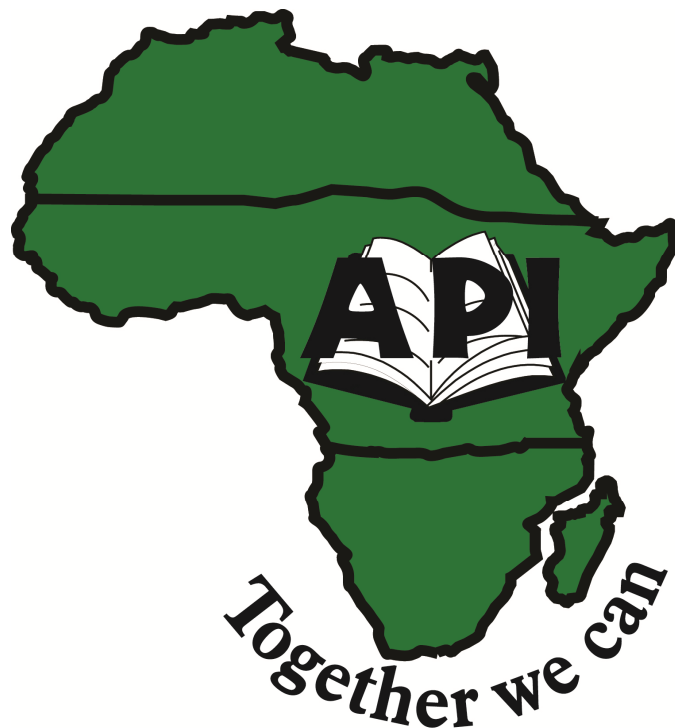


**AFRICA POPULATION INSTITUTE  
(API)**



**PUBLIC ADMINISTRATION & MANAGEMENT  
TERM TWO STUDENT'S MODULES  
(PAM)  
Contents**

APDPA 201	Basic Statistics
APDPA 202	Human Resource Management
APDPA 203	Communication Skills
APDPA 204	Development Economics
APDPA 205	Organisational Management

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### **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 information 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 .

**INFERENCE 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 may 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 free of bias). Non probabilistic methods are not applicable in inferential statistics.

**Population:** is the total set of elements or characters under observation/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 surrounding the estimation techniques, each statistic must be accompanied by a measure of reliability of inference.

## Average

In mathematics, an **average, central tendency**<sup>[1]</sup> 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).<sup>[2]</sup>

## Calculation

### Arithmetic mean

Main article: Arithmetic mean

If  $n$  numbers are given, each number denoted by  $a_i$ , where  $i = 1, \dots, n$ , 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  $n$ th root. In algebraic terms, the geometric mean of  $a_1, a_2, \dots, a_n$  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  $a_1, a_2, \dots, a_n$  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** also noted as average

**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	<u>median</u>
$L^2$	<u>standard deviation</u>	<u>mean</u>
$L^\infty$	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  $L^\infty$  norm.

### Miscellaneous types

Other more sophisticated averages are: trimean, trimedean, 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  $g(x_1, x_2, \dots, x_n)$ , 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:  $g(x_1, x_2, \dots, x_n) = g(y, y, \dots, y)$ . 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  $g(x_1, x_2, \dots, x_n) = x_1 + x_2 + \dots + x_n$  provides the arithmetic mean. The function  $g(x_1, x_2, \dots, x_n) = x_1 \cdot x_2 \cdot \dots \cdot x_n$  provides the geometric mean. The function  $g(x_1, x_2, \dots, x_n) = x_1^{-1} + x_2^{-1} + \dots + x_n^{-1}$  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.<sup>[3]</sup> 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.<sup>[1]</sup> 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  $3 \times 2$  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.<sup>[1]</sup>

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.<sup>[2]</sup>

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<sup>[3]</sup>

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

Scott's choice<sup>[4]</sup>

where  $\sigma$  is the sample [standard deviation](#).

Freedman-Diaconis' choice<sup>[5]</sup>

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  $k$ th  $q$ -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).<sup>[3]</sup>

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

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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<sup>[1]</sup>. 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.<sup>[2]</sup>

## 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)  $\mu = E(X)$ , then the variance  $\text{Var}(X)$  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  $\text{Var}(X)$ , , or simply  $\sigma^2$  (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

$x_1 \mapsto p_1, \dots, x_n \mapsto p_n$ , 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  $\lambda$  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  $(1 \times 1 + 2 \times 2 + 3 \times 3 + 4 \times 4) / 4 = 7.5$ . 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  $SS / n - M \times M$ . In this example the outcome would be  $30 / 4 - 2.5 \times 2.5 = 7.5 - 6.25 = 1.25$ . 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.<sup>[1]</sup> 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  $\sigma^2$ , 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  $\text{Cov}(X, X) = \text{Var}(X)$ .)

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  $\sigma^2$  and the average correlation of distinct variables is  $\rho$ , 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  $\rho$  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 disproportionately 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,  $E(X|Y)$  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  $E(X|Y)$  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  $\frac{1}{2}ax^2 + bx + c$ , where  $a > 0$ . This also holds in the multidimensional case.<sup>[2]</sup>

### 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.<sup>[citation needed]</sup>

### 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  $\mu$  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  $\sigma^2$ . If the conditions of the law of large numbers hold,  $s^2$  is a consistent estimator of  $\sigma^2$ .

### Generalizations

Unbiased estimate for expected error in the mean of  $A$  for a sample of  $M$  data points with sample bias coefficient  $\rho$ . The log-log slope  $-1/2$  line for  $\rho=0$  is the unbiased standard error.

If  $X$  is a vector-valued random variable, with values in  $\mathbb{R}^n$ , and thought of as a column vector, then the natural generalization of variance is  $\text{Cov}(X, X^T)$ , where  $X^T$  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  $\mathbb{C}^n$ , then its variance is  $\text{Cov}(X, X^*)$ , 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  $\mathbf{x}$ , the cross-covariance of variables  $A[\mathbf{x}]$  and  $B[\mathbf{x}]$  as a function of  $n$ -dimensional vector displacement (or lag)  $\Delta\mathbf{x}$  may be defined as  $\sigma_{AB}[\Delta\mathbf{x}] = \langle (A[\mathbf{x} + \Delta\mathbf{x}] - \mu_A)(B[\mathbf{x}] - \mu_B) \rangle_{\mathbf{x}}$ . Here the population (as distinct from sample) average over  $\mathbf{x}$  is denoted by angle brackets  $\langle \rangle_{\mathbf{x}}$  or the Greek letter  $\mu$ .

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.  $\sigma_A = \text{Sqrt}[\sigma_{AA}[0]]$ ). This results in a correlation coefficient  $\rho_{AB}[\Delta\mathbf{x}] = \sigma_{AB}[\Delta\mathbf{x}] / (\sigma_A \sigma_B)$  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*  $\rho$  as an average of the autocorrelation-coefficient  $\rho_{AA}[\Delta\mathbf{x}]$  over all point pairs in a set of M sample points<sup>[3]</sup>, an unbiased estimate for *expected error in the mean* of A is the square root of: sample variance (taken as a population) times  $(1 + (M-1)\rho) / ((M-1)(1-\rho))$ . When  $\rho$  is much greater than  $1/(M-1)$ , this reduces to the square root of: sample variance (taken as a population) times  $\rho / (1-\rho)$ . When  $|\rho|$  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  $\Sigma$  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.<sup>[1]</sup>

## Definition

Skewness, the third standardized moment, is written as  $\gamma_1$  and defined as where  $\mu_3$  is the third moment about the mean and  $\sigma$  is the standard deviation. Equivalently, skewness can be defined as the ratio of the third cumulant  $\mathbf{K}_3$  and the third power of the square root of the second cumulant  $\mathbf{K}_2$ :

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  $\text{Skew}[X]$ .

## Sample skewness

For a sample of  $n$  values the *sample skewness* is

where  $X_i$  is the  $i^{\text{th}}$  value,  $\bar{x}$  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  $\text{Skew}[Y] = \text{Skew}[X] / \sqrt{n}$ .

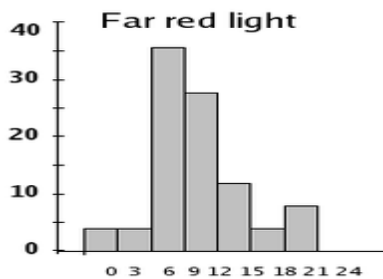
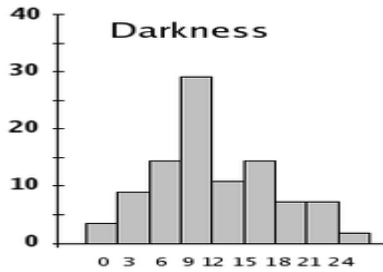
## Kurtosis

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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  $\mu_4$  is the fourth moment about the mean and  $\sigma$  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  $\text{Kurt}[Y] = \text{Kurt}[X] / n$ , while the formula would be more complicated if kurtosis were defined as  $\mu_4 / \sigma^4$ .

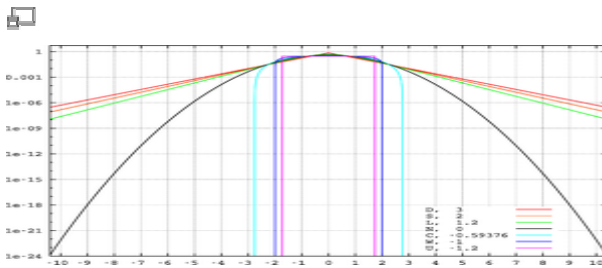
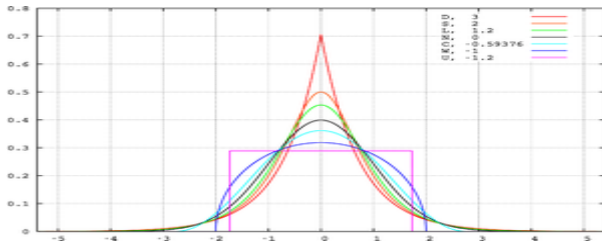
More generally, if  $X_1, \dots, X_n$  are independent random variables all *having the same variance*, then

$$\text{Kurt} \left( \sum_{i=1}^n X_i \right) = \frac{1}{n^2} \sum_{i=1}^n \text{Kurt}(X_i),$$

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  $p = 1/2$ , 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 =  $-0.593762\dots$
- 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

$$g_2 = \frac{m_4}{m_2^2} - 3 = \frac{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^4}{\left(\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2\right)^2} - 3$$

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  $i^{\text{th}}$  value, and  $\bar{x}$  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

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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](#)

```
          +-----++
o      *  |-----|  | |---|
          +-----++
```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+ number line

0 1 2 3 4 5 6 7 8 9 10 11 12

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,  $IQR = Q3 - Q1 = 2$

### 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  $\infty$  equals 0.25; in terms of the CDF, the quartiles can be defined as follows:

$$Q1 = \text{CDF}^{-1}(0.25)$$

$$Q3 = \text{CDF}^{-1}(0.75)$$

The interquartile range and median of some common distributions are shown below

Distribution	Median	IQR
<u>Normal</u>	$\mu$	$2 \Phi^{-1}(0.75) \approx 1.349$
<u>Laplace</u>	$\mu$	$2b \ln(2)$
Cauchy	$\mu$	

## 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.

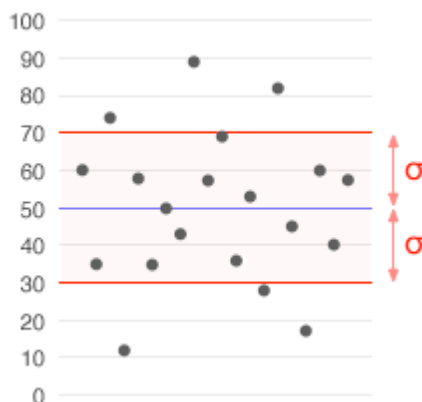
For a population, the range is greater than or equal to twice the standard deviation, which equality only for the coin toss (Bernoulli distribution with  $p = \frac{1}{2}$ ).

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 ( $\sigma$ ) 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<sup>[1]</sup> in writing by Karl Pearson<sup>[2]</sup> 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".<sup>[3]</sup> 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  $\mu$ :

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  $\sigma$  ([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  $\sigma$  can be calculated as follows:

1. Find the mean,  $\bar{x}$ , of the values.
2. For each value  $X_i$  calculate its deviation  $(X_i - \bar{x})$  from the mean.
3. Calculate the squares of these deviations.
4. Find the mean of the squared deviations. This quantity is the [variance](#)  $\sigma^2$ .
5. Take the square root of the variance.

This calculation is described by the following formula:

where  $\bar{x}$  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  $\sigma$  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  $\sigma$  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  $\sigma$  used is an adjusted version, the **sample standard deviation**, denoted by "s" and defined as follows:

where  $n$  is the sample size and  $\bar{x}$  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  $\sigma^2$  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**  $\sigma$ ; 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,  $\mathbf{e}$ .

### With interquartile range

The statistic

$(1.35 \text{ is an approximation})$  where IQR is the interquartile range of the sample, is a consistent estimate of  $\sigma$ . 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.<sup>[4]</sup>[not in citation given][dubious - discuss]

### Other estimators

*Further information:* Unbiased estimation of standard deviation

Although an unbiased estimator for  $\sigma$  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  $\Delta$  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  $n$ :

$$MD = \frac{1}{n(n-1)} \sum_{i=1}^n \sum_{j=1}^n |y_i - y_j|$$

For a discrete probability function  $f(y)$ , where  $y_i$ ,  $i = 1$  to  $n$ , are the values with nonzero probabilities:

$$MD = \sum_{i=1}^n \sum_{j=1}^n f(y_i) f(y_j) |y_i - y_j|$$

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  $\nabla$  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  $\mathbf{X}$ , 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  $MD(\mathbf{X})$ .

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  $RMD(\mathbf{X})$ , but is not, in general, unbiased.

Confidence intervals for  $RMD(\mathbf{X})$  can be calculated using bootstrap sampling techniques.

There does not exist, in general, an unbiased estimator for  $RMD(\mathbf{X})$ , 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  $\mathbf{X}(p)$  for an unknown  $p$ , and  $\mathbf{X}(p) - 1$  has the Bernoulli distribution, so that  $\Pr(\mathbf{X}(p) = 1) = 1 - p$  and  $\Pr(\mathbf{X}(p) = 2) = p$ , then

$$RMD(\mathbf{X}(p)) = 2p(1-p)/(1+p).$$

But the expected value of any estimator  $R(\mathbf{S})$  of  $RMD(\mathbf{X}(p))$  will be of the form:

$$E(R(\mathbf{S})) = \sum_{i=0}^n p^i (1-p)^{n-i} r_i$$

where the  $r_i$  are constants. So  $E(R(\mathbf{S}))$  can never equal  $RMD(\mathbf{X}(p))$  for all  $p$  between 0 and 1.

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<b>Course Name</b>	<b>: Elements of Human resource Management</b>
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### **Course Description**

The Course deals with comprehensive analysis of Human Resource Management (HRM), its features, goals, and various theories behind HRM, workforce planning, recruitment in HRM, training and development, skills management, relevance of time & skills Management in HRM, Wage and Salaries, Payroll, Employee benefits, Performance Appraisal (PA).

### **Course Objectives**

- To help students get exposed to theoretical perspectives of managing human resources in Organizations.
- To help students develop knowledge to analyze different processes involved in recruiting employees in various work places.
- To provide students with opportunities of getting exposed to different motivational theories most applicable in Human resource management.

### **Contents**

#### **Introduction to HRM**

- Definition of Human Resource Management
- Features of HRM
- Goal of HRM
- Theories of HRM
- Careers and education in HRM
- Functions of HRM

#### **Workforce Planning**

- Importance of workforce planning
- Approaches that support workforce planning
- Environment scan
- Current workforce profile
- Future workforce view
- Analysis and targeted future
- Closing gaps

#### **Recruitment**

- Definition of recruitment
- Agency types
- Job analysis
- Sourcing
- Screening and selection
- Job search engines

#### **Training and Development**

- Process of training human resource
- Main activities of training and development
- Stakeholders in training
- Consequences of training and career development in HRM

- Implications of training and development

### **Skills Management**

- Understanding of skills management in HRM
- Process of skills management
- Employees who benefit
- Organization executives
- Line managers
- Relevance of skills management to HRM

### **Wages and Salaries**

- Differences between wages and salaries
- Determinants of wage rates
- Case study; wages in the United States
- Salaried employment in the 20<sup>th</sup> Century
- Salary and other forms of payments today
- Categories of salaried workers exempted from over time provisions

### **Time Management**

- Relationship between HRM and time management
- Eisenhower method used to manage time in HRM
- Time management approaches
- Time management and related concepts
- Personal time management
- How we use time

### **Task list**

- Meaning of task list
- Prioritization of task lists
- Alternatives to prioritizing
- Software applications
- Techniques for setting priorities

### **Payroll**

- Meaning of payroll
- Difference between payroll and paycheck
- Payroll taxes
- Pay slip
- Payroll card
- Payroll frequencies
- Warrants
- Payroll outsourcing

### **Employee benefits**

- Meaning employee benefits
- Case study: Employee benefits in the United States, U.K
- Advantages of employee benefits
- Disadvantages of employee benefits

### **Performance Appraisal (PA)**

- Meaning of Performance Appraisal
- Aims of performance Appraisal

- Popular methods used to measure PA
- Factors to be avoided when assessing employees

**Mode of delivery** Face to face lectures

### **Assessment**

**Course work** 40%

**Exams** 60%

**Total Mark** 100%

### **Definition**

Human Resource Management (HRM) is the function within an organization that focuses on recruitment of, management of, and providing direction for the people who work in the organization. Human Resource Management can also be performed by line managers.

**Human Resource Management is the organizational function that deals with issues related to people such as compensation, hiring, performance management, organization development, safety, wellness, benefits, employee motivation, communication, administration, and training.**

### **INTRODUCTION**

**Human resource management** (HRM) is the strategic and coherent approach to the management of an organization's most valued assets - the people working there who individually and collectively contribute to the achievement of the objectives of the business. The terms "human resource management" and "human resources" (HR) have largely replaced the term "personnel management" as a description of the processes involved in managing people in organizations. In simple sense, HRM means employing people, developing their resources, utilizing, maintaining and compensating their services in tune with the job and organizational requirement.

### **Features**

Its features include:

- Organizational management
- Personnel administration
- Manpower management
- Industrial management But these traditional expressions are becoming less common for the theoretical discipline. Sometimes even employee and industrial relations are confusingly listed as synonyms although these normally refer to the relationship between management and workers and the behavior of workers in companies.

The theoretical discipline is based primarily on the assumption that employees are individuals with varying goals and needs, and as such should not be thought of as basic business resources, such as trucks and filing cabinets. The field takes a positive view of workers, assuming that virtually all wish to contribute to the enterprise productively, and that the main obstacles to their endeavors are lack of knowledge, insufficient training, and failures of process.

HRM is seen by practitioners in the field as a more innovative view of workplace management than the traditional approach. Its techniques force the managers of an enterprise to express their goals with specificity so that they can be understood and undertaken by the workforce, and to provide the resources needed for them to successfully accomplish their assignments. As such, HRM techniques, when properly practiced, are expressive of the goals and operating practices of the enterprise overall. HRM is also seen by many to have a key role in risk reduction within organizations. Synonyms such as *personnel management* are often used in a more restricted sense to describe activities that are necessary in the recruiting of a workforce, providing its members with payroll and benefits, and administering their work-life needs. So if we move to actual definitions, Torrington and Hall (1987) define personnel management as being:

*"a series of activities which: first enable working people and their employing organisations to agree about the objectives and nature of their working relationship and, secondly, ensures that the agreement is fulfilled" (p. 49).*

While Miller (1987) suggests that HRM relates to:

*".....those decisions and actions which concern the management of employees at all levels in the business and which are related to the implementation of strategies directed towards creating and sustaining competitive advantage" (p. 352).*

## **Academic theory**

The goal of human resource management is to help an organization to meet strategic goals by attracting, and maintaining employees and also to manage them effectively. The key word here perhaps is "fit", i.e. a HRM approach seeks to ensure a fit between the management of an organization's employees, and the overall strategic direction of the company (Miller, 1989).

The basic premise of the academic theory of HRM is that humans are not machines, therefore we need to have an interdisciplinary examination of people in the workplace. Fields such as psychology, industrial engineering, industrial, Legal/Paralegal Studies and organizational psychology, industrial relations, sociology, and critical theories: postmodernism, post-structuralism play a major role. Many colleges and universities offer bachelor and master degrees in Human Resources Management.

One widely used scheme to describe the role of HRM, developed by Dave Ulrich, defines 4 fields for the HRM function:



- Strategic business partner
- Change management
- Employee champion
- Administration

However, many HR functions these days struggle to get beyond the roles of administration and employee champion, and are seen rather as reactive than strategically proactive partners for the top management. In addition, HR organizations also have the difficulty in proving how their activities and processes add value to the company. Only in the recent years HR scholars and HR professionals are focusing to develop models that can measure if HR adds value.

### **Critical Academic Theory**

Postmodernism plays an important part in Academic Theory and particularly in Critical Theory. Indeed Karen Legge in 'Human Resource Management: Rhetorics and Realities' poses the debate of whether HRM is a modernist project or a postmodern discourse (Legge 2004). In many ways, critically or not, many writers contend that HRM itself is an attempt to move away from the modernist traditions of personnel (man as machine) towards a postmodernist view of HRM (man as individuals). Critiques include the notion that because 'Human' is the subject we should recognize that people are complex and that it is only through various discourses that we understand the world. Man is not Machine, no matter what attempts are made to change it i.e. Fordism / Taylorism, McDonaldisation (Modernism).

Critical Theory also questions whether HRM is the pursuit of "attitudinal shaping" (Wilkinson 1998), particularly when considering empowerment, or perhaps more precisely pseudo-empowerment - as the critical perspective notes. Many critics note the move away from Man as Machine is often in many ways, more a Linguistic (discursive) move away than a real attempt to recognise the Human in Human Resource Management.

Critical Theory, in particular postmodernism (poststructuralism), recognises that because the subject is people in the workplace, the subject is a complex one, and therefore simplistic notions of 'the best way' or a unitary perspectives on the subject are too simplistic. It also considers the complex subject of power, power games, and office politics. Power in the workplace is a vast and complex subject that cannot be easily defined. This leaves many critics to suggest that Management 'Gurus', consultants, 'best practice' and HR models are often overly simplistic, but in order to sell an idea, they are simplified, and often lead Management as a whole to fall into the trap of oversimplifying the relationship.

### **Business practice**

Human resources management comprises several processes. Together they are supposed to achieve the above mentioned goal. These processes can be performed in an HR department, but some tasks can also be outsourced or performed by line-

managers or other departments. When effectively integrated they provide significant economic benefit to the company. Workforce planning

- Recruitment (sometimes separated into attraction and selection)
- Induction and Orientation
- Skills management
- Training and development
- Personnel administration
- Compensation in wage or salary
- Time management
- Travel management (sometimes assigned to accounting rather than HRM)
- Payroll (sometimes assigned to accounting rather than HRM)
- Employee benefits administration
- Personnel cost planning
- Performance appraisal

### **Careers and education**

The sort of careers available in HRM are varied. There are generalist HRM jobs such as human resource assistant. There are careers involved with employment, recruitment and placement and these are usually conducted by interviewers, EEO (Equal Employment Opportunity) specialists or college recruiters. Training and development specialism is often conducted by trainers and orientation specialists. Compensation and benefits tasks are handled by compensation analysts, salary administrators, and benefits administrators.

Several universities offer programs of study pertaining to HRM and broader fields. Cornell University created the world's first school for college-level study in HRM (ILR School).<sup>[9]</sup> University of Illinois at Urbana-Champaign also now has a school dedicated to the study of HRM, while several business schools also house a center or department dedicated to such studies; e.g., Michigan State University, Ohio State University, and Purdue University.

### **Professional organizations**

Professional organizations in HRM include the Society for Human Resource Management, the Australian Human Resources Institute (AHRI), the Chartered Institute of Personnel and Development (CIPD), the International Public Management Association for HR (IPMA-HR), Management Association of Nepal (MAN) and the International Personnel Management Association of Canada (IPMA-Canada), Human Capital Institute (HCI)

### **Functions**

The Human Resources Management (HRM) function includes a variety of activities, and key among them is deciding what staffing needs you have and whether to use independent contractors or hire employees to fill these needs, recruiting and training the best employees, ensuring they are high performers, dealing with performance issues, and ensuring your personnel and management practices conform to various

regulations. Activities also include managing your approach to employee benefits and compensation, employee records and personnel policies. Usually small businesses (for-profit or nonprofit) have to carry out these activities themselves because they can't yet afford part- or full-time help. However, they should always ensure that employees have -- and are aware of -- personnel policies which conform to current regulations. These policies are often in the form of employee manuals, which all employees have.

Note that some people distinguish a difference between HRM (a major management activity) and HRD (Human Resource Development, a profession). Those people might include HRM in HRD, explaining that HRD includes the broader range of activities to develop personnel inside of organizations, including, eg, career development, training, organization development, etc.

There is a long-standing argument about where HR-related functions should be organized into large organizations, eg, "should HR be in the Organization Development department or the other way around?"

The HRM function and HRD profession have undergone tremendous change over the past 20-30 years. Many years ago, large organizations looked to the "Personnel Department," mostly to manage the paperwork around hiring and paying people. More recently, organizations consider the "HR Department" as playing a major role in staffing, training and helping to manage people so that people and the organization are performing at maximum capability in a highly fulfilling manner.

### **Karen et al (2004). *Human Resource Management***

## **2. Workforce planning**

**Strategic Workforce Planning** is the business process for ensuring that an organization has suitable access to talent to ensure future business success. Access to talent includes considering all potential access sources (employment, contracting out, partnerships, changing business activities to modify the types of talent required, etc. By talent is meant the skills, knowledge, predisposition and ability to undertake required activities including decisions making. Strategic Planning considers the business risks concerning insufficient, disrupted, miss-deployed talent on the organization's business priorities.

Strategic Workforce Planning is analogous to the treasurer role which is concerned with ensuring the organization has suitable access to working capital. This role also looks at multiple sources for access and similar risks to those mentioned above.

One of the more restrictive and potentially dangerous assumptions is that Strategic Planning is only about talent in the form of employees. Hiring is a strategy for accessing talent and will often be the superior one. However, the use of employees to meet talent needs carries with it unique risks that can be mitigated using alternative

access sourcing arrangements. Regardless of the access source used, insightful assessment of the strategy's attendant business risk is prudent.

The process for starting out Strategic Workforce Planning is link with the organization's strategy. This means identifying the critical talent needs that if not met can materially adversely impact business success. Once the business risks are fully appreciated then attention turns to schedule and timing. Assessing current internal capability and assessing its relative position when it will be called upon in the future. Speculating on future sourcing options and identifying the preferred sourcing option. Implementation and execution follow. Attention to periodically reviewing the "sanity" of the current plan is prudent.

## **4.5 Closing the Gaps**

### **Workforce analytics approach**

The focus is to analyze current and historical employee data to identify key relationships among variables and use this to provide insight into the workforce they need for the future..

### **Modeling approach**

This approach incorporates forecasting and scenario planning. Forecasting uses quantitative data to create forecasts incorporating multiple what-if and modeling the future. Scenario Planning being the more useful tool where there are uncertainties, therefore incorporating quantitative and qualitative.

### **Segmentation approach**

Breaking the workforce into segments along the lines of their jobs and determining relevance to strategic intent. Provides a technique for prioritizing.

### **Steps in Workforce Planning**

Though there is no definitive 'Start here' activity for any of the approaches to Strategic Workforce Planning, there are five fundamentals activities that most Workforce Plan models have:

- Environment Scan
- Current Workforce Profile
- Future Workforce View
- Analysis and Targeted Future
- Closing the gaps

## **Environment Scan**

Environment Scanning is a form of business intelligence. In the context of Workforce Planning it is used to identify the set of facts or circumstances that surround a workforce situation or event.

## **Current Workforce Profile**

Current State is a profile of the demand and supply factors both internally and externally of the workforce the organization has 'today'.

## **Future Workforce View**

Future View is determining the organization's needs considering the emerging trends and issues identified during the Environment Scanning.

Future View is often where the different approaches identified above are applied: Quantitative futuring: understanding the future you are currently tracking to by forecasting; Qualitative futuring: scenario planning potential alternative futures in terms of capabilities and demographics to deliver the business strategy.

## **Analysis and Targeted Future**

Qualitative and quantitative futuring creates the content for an organizational unit to analyse and identify critical elements. As the critical elements are identified the Targeted Future begins to take form. The targeted future is the future that the organization is going to target as being the best fit in terms of business strategy and is achievable given the surrounding factors (internal/external, supply/demand).

## **Closing the Gaps**

Closing the gaps is about the people management (human resources) programs and practices that deliver the workforce needed for today and tomorrow. The process is about determining appropriate actions to close the gaps and therefore deliver the targeted future.

There are 8 key areas that Closing the Gaps needs to focus on -

Resourcing, Learning and Development, Remuneration, Industrial Relations, Recruitment, Retention, Knowledge Management, Job design.

## **3. Recruitment**

**Recruitment** refers to the process of screening, and selecting qualified people for a job at an organization or firm, or for a vacancy in a volunteer-based some components of the recruitment process, mid- and large-size organizations and companies often retain professional recruiters or outsource some of the process to

recruitment agencies. External recruitment is the process of attracting and selecting employees from outside the organization.

The recruitment industry has four main types of agencies: employment agencies, recruitment websites and job search engines, "headhunters" for executive and professional recruitment, and in-house recruitment. The stages in recruitment include sourcing candidates by advertising or other methods, and screening and selecting potential candidates using tests or interviews.

## **Agency types**

The recruitment industry has four main types of agencies. Their recruiters aim to channel candidates into the hiring organizations application process. As a general rule, the agencies are paid by the companies, not the candidates.

### **Traditional Agency**

Also known as a employment agencies, recruitment agencies have historically had a physical location. A candidate visits a local branch for a short interview and an assessment before being taken onto the agency's books. Recruitment consultants then work to match their pool of candidates to their clients' open positions. Suitable candidates are short-listed and put forward for an interview with potential employers on a temporary ("temp") or permanent ("perm") basis.

Compensation to agencies take several forms, the most popular:

- A contingency fee paid by the company when a recommended candidate accepts a job with the client company (typically 20%-30% based and calculated of the candidates first-year base salary – though fees as low as 12.5% can be found online), which usually has some form of guarantee (30–90 days standard), should the candidate fail to perform and is terminated within a set period of time (refundable fully or prorated)
- An advance payment that serves as a retainer, also paid by the company, non-refundable paid in full depending on outcome and success (eg. 30% up front, 30% in 90 days and the remainder once a search is completed). This form of compensation is generally reserved for high level executive search/headhunters
- Hourly Compensation for temporary workers and projects. A pre-negotiated hourly fee, in which the agency is paid and pays the applicant as a consultant for services as a third party. Many contracts allow a consultant to transition to a full-time status upon completion of a certain number of hours with or without a conversion fee.

### **Headhunters**

A "headhunter" is industry term for a third-party recruiter who seeks out candidates, often when normal recruitment efforts have failed. Headhunters are generally considered more aggressive than in-house recruiters or may have preexisting industry experience and contacts. They may use advanced sales techniques, such as

initially posing as clients to gather employee contacts, as well as visiting candidate offices. They may also purchase expensive lists of names and job titles, but more often will generate their own lists. They may prepare a candidate for the interview, help negotiate the salary, and conduct closure to the search. They are frequently members in good standing of industry trade groups and associations. Headhunters will often attend trade shows and other meetings nationally or even internationally that may be attended by potential candidates and hiring managers.

Headhunters are typically small operations that make high margins on candidate placements (sometimes more than 30% of the candidate's annual compensation). Due to their higher costs, headhunters are usually employed to fill senior management and executive level roles. Headhunters are also used to recruit very specialized individuals; for example, in some fields, such as emerging scientific research areas, there may only be a handful of top-level professionals who are active in the field. In this case, since there are so few qualified candidates, it makes more sense to directly recruit them one-by-one, rather than advertise internationally for candidates. While in-house recruiters tend to attract candidates for specific jobs, headhunters will both attract candidates and actively seek them out as well. To do so, they may network, cultivate relationships with various companies, maintain large databases, purchase company directories or candidate lists, and cold call prospective recruits

### **In-House Recruitment**

Larger employers tend to undertake their own in-house recruitment, using their human resources department, front-line hiring managers and recruitment personnel who handle targeted functions and populations. In addition to coordinating with the agencies mentioned above, in-house recruiters may advertise job vacancies on their own websites, coordinate internal employee referrals, work with external associations, trade groups and/or focus on campus graduate recruitment. While job postings are common, networking is by far the most significant approach when reaching out to fill positions. Alternatively a large employer may choose to outsource all or some of their recruitment process(recruitment process outsourcing).

### **Passive Candidate Research Firms / Sourcing Firms**

These firms provide competitive passive candidate intelligence to support company's recruiting efforts. Normally they will generate varying degrees of candidate information from those people currently engaged in the position a company is looking to fill. These firms usually charge a per hour fee or by candidate lead. Many times this uncovers names that cannot be found with other methods and will allow internal recruiters the ability to focus their efforts solely on recruiting.

### **Process**

#### **Job Analysis**

The proper start to a recruitment effort is to perform a job analysis, to document the actual or intended requirement of the job to be performed. This information is

captured in a job description and provides the recruitment effort with the boundaries and objectives of the search. Oftentimes a company will have job descriptions that represent a historical collection of tasks performed in the past. These job descriptions need to be reviewed or updated prior to a recruitment effort to reflect present day requirements. Starting a recruitment with an accurate job analysis and job description insures the recruitment effort starts off on a proper track for success.

## **Sourcing**

Sourcing involves 1) advertising, a common part of the recruiting process, often encompassing multiple media, such as the Internet, general newspapers, job ad newspapers, professional publications, window advertisements, job centers, and campus graduate recruitment programs; and 2) recruiting research, which is the proactive identification of relevant talent who may not respond to job postings and other recruitment advertising methods done in #1. This initial research for so-called passive prospects, also called name-generation, results in a list of prospects who can then be contacted to solicit interest, obtain a resume/CV, and be screened (see below).

## **Screening and selection**

Suitability for a job is typically assessed by looking for skills, e.g. communication, typing, and computer skills. Qualifications may be shown through résumés, job applications, interviews, educational or professional experience, the testimony of references, or in-house testing, such as for software knowledge, typing skills, numeracy, and literacy, through psychological tests or employment testing. In some countries, employers are legally mandated to provide equal opportunity in hiring. Business management software is used by many recruitment agencies to automate the testing process. Many recruiters and agencies are using an Applicant tracking system to perform many of the filtering tasks, along with software tools for psychometric testing

## **On boarding**

"On boarding" is a term which describes the introduction or "induction" process. A well-planned introduction helps new employees become fully operational quickly and is often integrated with a new company and environment. On boarding is included in the recruitment process for retention purposes. Many companies have on boarding campaigns in hopes to retain top talent that is new to the company, campaigns may last anywhere from 1 week to 6 months.

## **Internet Recruitment / Websites**

Such sites have two main features: job boards and a résumé/curriculum vitae (CV) database. Job boards allow member companies to post job vacancies. Alternatively, candidates can upload a résumé to be included in searches by member companies. Fees are charged for job postings and access to search resumes. Since the late



1990s, the recruitment website has evolved to encompass end-to-end recruitment. Websites capture candidate details and then pool them in client accessed candidate management interfaces (also online). Key players in this sector provide e-recruitment software and services to organizations of all sizes and within numerous industry sectors, who want to e-enable entirely or partly their recruitment process in order to improve business performance.

The online software provided by those who specialize in online recruitment helps organizations attract, test, recruit, employ and retain quality staff with a minimal amount of administration. Online recruitment websites can be very helpful to find candidates that are very actively looking for work and post their resumes online, but they will not attract the "passive" candidates who might respond favorably to an opportunity that is presented to them through other means. Also, some candidates who are actively looking to change jobs are hesitant to put their resumes on the job boards, for fear that their current companies, co-workers, customers or others might see their resumes.

### **Job search engines**

The emergence of meta-search engines, allow job-seekers to search across multiple websites. Some of these new search engines index and list the advertisements of traditional job boards. These sites tend to aim for providing a "one-stop shop" for job-seekers. However, there are many other job search engines which index pages solely from employers' websites, choosing to bypass traditional job boards entirely. These vertical search engines allow job-seekers to find new positions that may not be advertised on traditional job boards, and online recruitment websites.

## **5. Training and Development**

In the field of human resource management, *training and development* is the field concerned with organizational activity aimed at bettering the performance of individuals and groups in organizational settings. It has been known by several names, including **employee development**, **human resource development**, and **learning and development**.

Harrison observes that the name was endlessly debated by the Chartered Institute of Personnel and Development during its review of professional standards in 1999/2000. "Employee Development" was seen as too evocative of the master-slave relationship between employer and employee for those who refer to their employees as "partners" or "associates" to be comfortable with. "Human Resource Development" was rejected by academics, who objected to the idea that people were "resources" — an idea that they felt to be demeaning to the individual. Eventually, the CIPD settled upon "Learning and Development", although that was itself not free from problems, "learning" being an overgeneral and ambiguous name. Moreover, the field is still widely known by the other names

Training and development encompasses three main activities: training, education, and development. Garavan, Costine, and Heraty, of the Irish Institute of Training and Development, note that these ideas are often considered to be synonymous. However, to practitioners, they encompass three separate, although interrelated, activities

Training; this activity is both focused upon, and evaluated against, the job that an individual currently hold

Education; this activity focuses upon the jobs that an individual may potentially hold in the future, and is evaluated against those jobs. Development; this activity focuses upon the activities that the organization employing the individual, or that the individual is part of, may partake in the future, and is almost impossible to evaluate

The "stakeholders" in training and development are categorized into several classes. The *sponsors* of training and development are senior managers. The *clients* of training and development are business planners. Line managers are responsible for coaching, resources, and performance. The *participants* are those who actually undergo the processes. The *facilitators* are Human Resource Management staff. And the *providers* are specialists in the field. Each of these groups has its own agenda and motivations, which sometimes conflict with the agendas and motivations of the others.

The conflicts are the best part of career consequences are those that take place between employees and their bosses. The number one reason people leave their jobs is conflict with their bosses. And yet, as author, workplace relationship authority, and executive coach, Dr. John Hoover points out, "Tempting as it is, nobody ever enhanced his or her career by making the boss look stupid." Training an employee to get along well with authority and with people who entertain diverse points of view is one of the best guarantees of long-term success. Talent, knowledge, and skill alone won't compensate for a sour relationship with a superior, peer, or customer.

Planning the business process for is t Strategic Workforce ensuring that an organization has suitable access to talent to ensure future business success. Access to talent includes considering all potential access sources (employment, contracting out, partnerships, changing business activities to modify the types of talent required, etc. By talent is meant the skills, management

## 6. SKILLS MANAGEMENT

**Skills Management** is the practice of understanding, developing and deploying people and their skills. Well-implemented skills management should identify the skills that job roles require, the skills of individual employees, and any gap between the two.

The skills involved can be defined by the organization concerned, or by third party institutions. They are usually defined in terms of a skills framework, also known as a

competency framework or skills matrix. This consists of a list of skills, and a grading system, with a definition of what it means to be at particular level for a given skill. (For an example of a mature skills framework, see the Skills Framework for the Information Age, a technical IT skills framework owned by a British not-for-profit organization.)

To be most useful, skills management needs to be conducted as an ongoing process, with individuals assessing and updating their recorded skill sets regularly. These updates should occur at least as frequently as employees' regular line manager reviews, and certainly when their skill sets have changed.

Skills management *systems* record the results of this process in a database, and allow analysis of the data.

In order to perform the functions of management and to assume multiple roles, managers must be skilled. Robert Katz identified three managerial skills that are essential to successful management: technical, human, and conceptual\*. Technical skill involves process or technique knowledge and proficiency. Managers use the processes, techniques and tools of a specific area. Human skill involves the ability to interact effectively with people. Managers interact and cooperate with employees. Conceptual skill involves the formulation of ideas. Managers understand abstract relationships, develop ideas, and solve problems creatively. Thus, technical skill deals with things, human skill concerns people, and conceptual skill has to do with ideas. A manager's level in the organization determines the relative importance of possessing technical, human, and conceptual skills. Top level managers need conceptual skills in order to view the organization as a whole. Conceptual skills are used in planning and dealing with ideas and abstractions. Supervisors need technical skills to manage their area of specialty. All levels of management need human skills in order to interact and communicate with other people successfully.

As the pace of change accelerates and diverse technologies converge, new global industries are being created (for example, telecommunications). Technological change alters the fundamental structure of firms and calls for new organizational approaches and management skills.

### **Employees who benefit**

Skills management provides a structured approach to developing individual and collective skills, and gives a common vocabulary for discussing skills. As well as this general benefit, three groups of employees receive specific benefits from skills management.

#### **Individual Employees**

As a result of skills management, employees should be aware of the skills their job requires, and any skills gaps that they have. Depending on their employer, it may also result in a personal development plan (PDP) of training to bridge some or all of those skills gaps over a given period.

## Line manager

Skills management enables managers to know the skill strengths and weaknesses of employees reporting to them. It can also enable them to search for employees with particular skill sets (e.g. to fill a role on a particular job).

## Organization Executives

A rolled-up view of skills and skills gaps across an organization can enable its executives to see areas of skill strength and weakness. This enables them to plan for the future against the current and future abilities of staff, as well as to prioritize areas for skills development.

## 6. WAGES

A **wage** is compensation, usually financial, received by a worker in exchange for their labor.

Compensation in terms of wages is given to worker and compensation in terms of salary is given to employees. Compensation is a monetary benefits given to employees in returns of the services provided by them.

## Determinants of wage rates

Depending on the structure and traditions of different economies around the world, wage rates are either the product of market forces (Supply and Demand), as is common in the United States, or wage rates may be influenced by other factors such as tradition, social structure and seniority, as in Japan.

Several countries have enacted a statutory minimum wage rate that sets a price floor for certain kinds of labor.

## Wages in the United States

In the United States, wages for most workers are set by market forces, or else by collective bargaining, where a labor union negotiates on the workers' behalf. Although states and cities can and sometimes do set a minimum wage, the Fair Labor Standards Act requires a minimum wage at the federal level. For certain federal or state government contracts, employers must pay the so-called prevailing wage as determined according to the Davis-Bacon Act or its state equivalent. Activists have undertaken to promote the idea of a living wage rate which would be higher than current minimum wage laws require.

## 6 SALARIES

**salary** is a form of periodic payment from an employer to an employee, which may be specified in an employment contract. It is contrasted with piece wages, where each job, hour or other unit is paid separately, rather than on a periodic basis.

From the point of a view of running a business, salary can also be viewed as the cost of acquiring human resources for running operations, and is then termed personnel expense or salary expense. In accounting, salaries are recorded in payroll accounts.

### **Salaried employment in the 20th century**

In the 20th century, the rise of the service economy made salaried employment even more common in developed countries, where the relative share of industrial production jobs declined, and the share of executive, administrative, computer, marketing, and creative jobs--all of which tended to be salaried--increased.

### **Salary and other forms of payment today**

Today, the idea of a salary continues to evolve as part of a system of all the combined rewards that employers offer to employees. Salary (also now known as fixed pay) is coming to be seen as part of a "total rewards" system which includes variable pay (such as bonuses, incentive pay, and commissions), benefits and perquisites (or perks), and various other tools which help employers link rewards to an employee's measured performance.

### **Salaries in the U.S.**

In the United States, the distinction between periodic salaries (which are normally paid regardless of hours worked) and hourly wages (meeting a minimum wage test and providing for overtime) was first codified by the Fair Labor Standards Act of 1938. At that time, five categories were identified as being "exempt" from minimum wage and overtime protections, and therefore salariable. In 1991, some computer workers were added as a sixth category. The tests for all six categories were revised effective August 23, 2004.

The six categories of salaried workers exempt from overtime provisions are:

1. Executive Employees, who hire, fire and direct others
2. Administrative Employees, exercising discretion as part of office work
3. Learned Professional Employees, such as medical practitioners, lawyers, engineers, dentists, veterinarians, and accountants
4. *Creative Professional Employees* in an artistic field
5. Computer Employees, who must meet certain threshold tests
6. Outside Sales Employees, who must work away from an employer's place of business. Some of the 2004 exemption tests depend on being paid a weekly salary of greater than \$455, even though no *hourly* minimum wage is required or maximum number of hours worked is established.

General rule for comparing periodic salaries to hourly wages is based on a standard 40 hour work week with 50 weeks per year (minus two weeks for vacation)

## 7. Time management

### 3.6.5 The Eisenhower Method

Refers to a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, projects and goals. This set encompasses a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling, and prioritizing. Initially time management referred to just business or work activities, but eventually the term broadened to include personal activities also. A time management system is a designed combination of processes, tools and techniques.

Some authors (such as Stephen R. Covey) offered a categorization scheme for the hundreds of time management approaches that they reviewed

- First generation: reminders based on clocks and watches, but with computer implementation possible; can be used to alert a person when a task is to be done.
- Second generation: planning and preparation based on calendar and appointment books; includes setting goals.
- Third generation: planning, prioritizing, controlling (using a personal organizer, other paper-based objects, or computer or PDA-based systems) activities on a daily basis. This approach implies spending some time in clarifying values and priorities.
- Fourth generation: being efficient and proactive using any of the above tools; places goals and roles as the controlling element of the system and favors importance over urgency.

Some of the recent general arguments related to "time" and "management" point out that the term "time management" is misleading and that the concept should actually imply that it is "the management of our own activities, to make sure that they are accomplished within the available or allocated time, which is an unmanageable continuous resource".

Time management literature paraphrased: "Get Organized" - paperwork and task triage "Protect Your Time" - insulate, isolate, delegate "set gravitational goals" - that attract actions automatically "Achieve through Goal management Goal Focus" - motivational emphasis

- "Work in Priority Order" - set goals and prioritize
- "Use Magical Tools to Get More Out of Your Time" - depends on when written
- "Master the Skills of Time Management"
- "Go with the Flow" - natural rhythms, Eastern philosophy
- "Recover from Bad Time Habits" - recovery from underlying psychological problems, e.g. procrastination

## **Time management and related concepts**

Time management has been considered as subsets of different concepts such as:

- Project management. Time Management, can be considered as a project management subset, and is more commonly known as project planning and project scheduling. Time Management is also been identified as one of the core functions identified in project management .
- Attention management: Attention management relates to the management of cognitive resources, and in particular the time that humans allocate their mind (and organizations the minds of their employees) to conduct some activities.
- Personal knowledge management: see below (Personal time management).

## **Personal Time Management**

Time management strategies are often associated with the recommendation to set goals. These goals are recorded and may be broken down into a project, an action plan, or a simple task list. For individual tasks or for goals, an importance rating may be established, deadlines may be set, and priorities assigned. This process results in a plan with a task list or a schedule or calendar of activities. Authors may recommend a daily, weekly, monthly or other planning periods, usually fixed, but sometimes variable. Different planning periods may be associated with different scope of planning or review. Authors may or may not emphasize reviews of performance against plan. Routine and recurring tasks may or may not be integrated into the time management plan and, if integrated, the integration can be accomplished in various ways.

## **How We Use Time**

When we spend time, there is no improvement in efficiency, productivity, or effectiveness. The time is gone without a return. We save time when we perform tasks in less time or with less effort than previously. We use shortcuts and processes that streamline activities. We invest time when we take time now to save time later.

We spend time when we go to a movie; however, if we are a screenwriter, the time spent in the movie is an investment since it will help hone our writing skills. If we invest time to learn screenwriting software, we will save time in the future when we compose our scripts. However, this is still relative to the point that we are able to turn better writing skills and faster script development into profit - if we are able to sell it. In capitalism our investment, might very well be someone else's profit.

Delegation is a valuable investment of our time. When we delegate, we teach someone to perform tasks we usually perform. While the training process takes time now, the investment pays off later since we free our time to perform higher-payoff activities.

The goal is to look for ways a person can save and invest time.

## Task list

A **task list** (also *to-do list*) is a list of tasks to be completed, such as chores or steps toward completing a project. It is an inventory tool which serves as an alternative or supplement to memory.

Task lists are used in self-management, grocery lists, business management, project management, and software development. It may involve more than one list.

When you accomplish one of the items on a task list, you *check* it off or *cross* it off. The traditional method is to write these on a piece of paper with a pen or pencil, usually on a note pad or clip-board. Numerous digital equivalents are now available, including PIM (Personal information management) applications and most PDAs. There are also several web-based task list applications, many of which are free.

Task lists are often tiered. The simplest tiered system includes a general to-do list (or task-holding file) to record all the tasks the person needs to accomplish, and a daily to-do list which is created each day by transferring tasks from the general to-do list.

Task lists are often prioritized:

- An early advocate of "ABC" prioritization was Alan Lakein (See Books below.). In his system "A" items were the most important ("A-1" the most important within that group), "B" next most important, "C" least important.
- A particular method of applying the *ABC method*<sup>[2]</sup> assigns "A" to tasks to be done within a day, "B" a week, and "C" a month.
- To prioritize a daily task list, one either records the tasks in the order of highest priority, or assigns them a number after they are listed ("1" for highest priority, "2" for second highest priority, etc.) which indicates in which order to execute the tasks. The latter method is generally faster, allowing the tasks to be recorded more quickly.

## Alternatives to Prioritizing:

A completely different approach which argues against prioritising altogether was put forward by British author Mark Forster in his book "Do It Tomorrow and Other Secrets of Time Management". This is based on the idea of operating "closed" to-do lists, instead of the traditional "open" to-do list. He argues that the traditional never-ending to-do lists virtually guarantees that some of your work will be left undone. This approach advocates getting all your work done, every day, and if you are unable to achieve it helps you diagnose where you are going wrong and what needs to change. Recently, Forster developed the "Autofocus Time Management System", which further systematizes working a to-do list as a series of closed sublists and emphasizes intuitive choices.



## Software applications

Modern task list applications may have built-in task hierarchy (tasks are composed of subtasks which again may contain subtasks), may support multiple methods of filtering and ordering the list of tasks, and may allow one to associate arbitrarily long notes for each task.

In contrast to the concept of allowing the person to use multiple filtering methods, at least one new software product additionally contains a mode where the software will attempt to dynamically determine the best tasks for any given moment. Many of the software products for time management support multiple users. It allows the person to give tasks to other users and use the software for communication

Task list applications may be thought of as lightweight personal information manager or project management software.

## Resistors

- Fear of change: Change can be daunting and one may be afraid to change what's proven to work in the past.
- Uncertainty: Even with the change being inevitable, one may be hesitant as being not sure where to start. Uncertainty about when or how to begin making a change can be significant.
- Time pressure: To save time, one has to invest time, and this time investment may be a cause of concern. Fearing that changing may involve more work at the start—and thus, in the very short term, make things worse—is a common resistor.

## Attention Deficit Disorder

Excessive and chronic inability to manage time effectively may be a result of Attention Deficit Disorder (ADD). Diagnostic criteria includes: A sense of underachievement, difficulty getting organized, trouble getting started, many projects going simultaneously and trouble with follow-through.

- The Prefrontal Cortex: The Prefrontal Cortex is the most evolved part of the brain. It controls the functions of attention span, impulse control, organization, learning from experience and self-monitoring, among others. Daniel Amen, M.D. offers possible solutions in *Change Your Brain Change Your Life*.<sup>[7]</sup>

## Drivers

- Increased effectiveness: One may feel the need to make more time so as to be more effective in performing the job and carrying out responsibilities.

- Performance improvement: Time management is an issue that often arises during performance appraisals or review meetings.
- Personal development: One may view changing the approach to time management as a personal development issue and reap the benefit of handling time differently at work and at home.
- Increased responsibilities: A change in time-management approach may become necessary as a result of a promotion or additional responsibilities. Since there is more work to do, and still the same amount of time to do it in, the approach must change.

## Caveats

### Dwelling on the lists

- According to Sandberg task lists "aren't the key to productivity [that] they're cracked up to be". He reports an estimated "30% of listeners spend more time managing their lists than [they do] completing what's on them".
- This could be caused by procrastination by prolonging the planning activity. This is akin to analysis paralysis. As with any activity, there's a point of diminishing returns.

### Rigid adherence

- Hendrickson asserts that rigid adherence to task lists can create a "tyranny of the to-do list" that forces one to "waste time on unimportant activities".
- Again, the point of diminishing returns applies here too, but toward the size of the task. Some level of detail must be taken for granted for a task system to work. Rather than put "clean the kitchen", "clean the bedroom", and "clean the bathroom", it is more efficient to put "housekeeping" and save time spent writing and reduce the system's administrative load (each task entered into the system generates a cost in time and effort to manage it, aside from the execution of the task). The risk of consolidating tasks, however, is that "housekeeping" in this example may prove overwhelming or nebulously defined, which will either increase the risk of procrastination, or a mismanaged project.<sup>[citation needed]</sup>
- Listing routine tasks wastes time. If you are in the habit of brushing your teeth every day, then there is no reason to put it down on the task list. The same goes for getting out of bed, fixing meals, etc. If you need to track routine tasks, then a standard list or chart may be useful, to avoid the procedure of manually listing these items over and over.<sup>[citation needed]</sup>
- To remain flexible, a task system must allow adaptation, in the form of rescheduling in the face of unexpected problems and opportunities, to save time spent on irrelevant or less than optimal tasks.<sup>[citation needed]</sup>

- To avoid getting stuck in a wasteful pattern, the task system should also include regular (monthly, semi-annual, and annual) planning and system-evaluation sessions, to weed out inefficiencies and ensure the user is headed in the direction he or she truly desires.<sup>[citation needed][10]</sup>
- If some time is not regularly spent on achieving long-range goals, the individual may get stuck in a perpetual holding pattern on short-term plans, like staying at a particular job much longer than originally planned.<sup>[citation needed]</sup>

Set goals for oneself and work on achieving these goals. Some people study in different ways so you are to find out how you are able to study and put that into action. Some people are able to understand their work if they can see it. Some need to touch and feel whatever is being spoken about in the book. Some people need to see what they are studying in order to understand what is coming out of the book.

## Techniques for setting priorities

### ABC analysis

A technique that has been used in business management for a long time is the categorization of large data into groups. These groups are often marked A, B, and C—hence the name. Activities are ranked upon these general criteria:

- **A** – Tasks that are perceived as being urgent and important.
- **B** – Tasks that are important but not urgent.
- **C** – Tasks that are neither urgent nor important.

Each group is then rank-ordered in priority. To further refine priority, some individuals choose to then force-rank all "B" items as either "A" or "C". ABC analysis can incorporate more than three groups. ABC analysis is frequently combined with Pareto analysis.

### Pareto analysis

This is the idea that 80% of tasks can be completed in 20% of the disposable time. The remaining 20% of tasks will take up 80% of the time. This principle is used to sort tasks into two parts. According to this form of Pareto analysis it is recommended that tasks that fall into the first category be assigned a higher priority.

The 80-20-rule can also be applied to increase productivity: it is assumed that 80% of the productivity can be achieved by doing 20% of the tasks. If productivity is the aim of time management, then these tasks should be prioritized higher.

### Fit

Essentially, fit is the congruence of the requirements of a task (location, financial investment, time, etc.) with the available resources at the time. Often people are constrained by externally controlled schedules, locations, etc., and "fit" allows us to maximize our productivity given those constraints. For example, if one encounters a gap of 15 minutes in their schedule, it is typically more efficient to complete a task

that would require 15 minutes, than to complete a task that can be done in 5 minutes, or to start a task that would take 4 weeks. This concept also applies to time of the day: free time at 7am is probably less usefully applied to the goal of learning the drums, and more productively a time to read a book. Lastly, fit can be applied to location: free time at home would be used differently from free time at work, in town, etc.

## **POSEC method**

POSEC is an acronym for ***Prioritize by Organizing, Streamlining, Economizing and Contributing***.

The method dictates a template which emphasizes an average individual's immediate sense of emotional and monetary security. It suggests that by attending to one's personal responsibilities first, an individual is better positioned to shoulder collective responsibilities.

Inherent in the acronym is a hierarchy of self-realization which mirrors Abraham Maslow's "Hierarchy of needs".

1. **PRIORITIZE**-Your time and define your life by goals.
2. **ORGANIZING**-Things you have to accomplish regularly to be successful. (Family and Finances)
3. **STREAMLINING**-Things you may not like to do, but must do. (Work and Chores)
4. **ECONOMIZING**-Things you should do or may even like to do, but they're not pressingly urgent. (Pastimes and Socializing)
5. **CONTRIBUTING**-By paying attention to the few remaining things that make a difference. (Social Obligations)

## **The Eisenhower Method**

All tasks are evaluated using the criteria important/unimportant and urgent/not urgent and put in according quadrants. Tasks in unimportant/not urgent are dropped, tasks in important/urgent are done immediately and personally, tasks in unimportant/urgent are delegated and tasks in important/not urgent get an end date and are done personally. This method is said to have been used by US President Dwight D. Eisenhower, and is outlined in a quote attributed to him: *What is important is seldom urgent and what is urgent is seldom important.*

## **8. PAYROLL**

In a company, **payroll** is the sum of all financial records of salaries, wages, bonuses and deductions.

## **Paycheck**

A paycheck, is traditionally a paper document issued by an employer to pay an employee for services rendered. In recent times, the physical paycheck has been increasingly replaced by electronic direct deposit to bank accounts.

In most countries with a developed wire transfer system, using a physical check for paying wages and salaries has been uncommon for the past several decades. However, vocabulary referring to the figurative "paycheck" does exist in some languages, like German (*Gehaltsscheck*), partially due to the influence of US popular media, but this commonly refers to a payslip or stub rather than an actual check. Some company payrolls have eliminated both the paper check and stub, in which case an electronic image of the stub is available on an Internet website.

## **Payroll taxes**

Federal/national, state/provincial, and/or local agencies require employers to perform various payroll functions such as withholding amounts from employees' compensation to cover income tax, Social Security, and Medicare.

Payroll taxes are levied by government agencies on employees' wages, tips, and other compensation. The amounts withheld by employers from employees' pay for federal income, social security, and Medicare taxes are considered to be trust-fund taxes, because the money is held in a special trust fund for the U.S. government. Amounts withheld for state and local income taxes are held in trust for the state and local governments.

## **Pay slip**

A pay stub, paystub, pay slip, pay advice, or sometimes paycheck stub, is a document an employee receives either as a notice that the direct deposit transaction has gone through, or as part of their paycheck. It will typically detail the gross income and all taxes and any other deductions such as retirement plan contributions, insurances, garnishments, or charitable contributions taken out of the gross amount to arrive at the final net amount of the pay, also including the year to date totals in some circumstances.

## **Payroll card**

For employees that, for one reason or another, do not have access to a bank account (bad check history, not in close proximity to bank, etc), there is a solution, offered by most major Payroll Service Providers. Instead of an employee receiving a check, and paying up to 5-10% to cash the check, the employee can have the direct deposit loaded onto a debit card. In this, a company can save money on printing checks, not buy the expensive check stock, and not having to worry about check fraud, due to a check being lost or stolen. A payroll card is a plastic card allowing an employee to access their pay by using a debit card. A payroll card can be more convenient than using a check casher, because it can be used at participating automatic teller machines to withdraw cash, or in retail environments to make purchases. Some

payroll cards are cheaper than payday loans available from retail check cashing stores, but others are not. Most payroll cards will charge a fee if used at an ATM more than once per pay period.

The payroll card account may be held as a single account in the employer's name. In that case, the account holds the payroll funds for all employees using the payroll card system. Some payroll card programs establish a separate account for each employee, but others do not.

Many payroll cards are individually owned dda (demand deposit accounts) that are owned by the employee. These cards are more flexible, allowing the employee to use the card for paying bills, and the accounts are portable. Most payroll card accounts are FDIC-insured, but some are not.

## **Payroll Frequencies**

Companies typically generate their payrolls on regular intervals, for the benefit of regular income to their employees. The regularity of the intervals, though, varies from company to company, and sometimes between job grades within a given company. Common payroll frequencies include: daily, weekly, bi-weekly (once every two weeks), semi-monthly (twice per month), and to somewhat of a lesser extent, monthly. Less common payroll frequencies include: 4-weekly (13 times per year), bi-monthly (once every two months), quarterly (once every 13 weeks), semi-annually (twice per year), and annually.

## **Warrants**

Payroll warrants look like checks and clear through the banking system like checks, but are not drawn against cleared funds in a deposit account. Instead they are drawn against "available funds" that are not in a bank account, so the issuer can collect interest on the float. In the US, warrants are issued by government entities such as the military and state and county governments. Warrants are issued for payroll to individuals and for accounts payable to vendors. Technically a warrant is not payable on demand and may not be negotiable. Deposited warrants are routed to a collecting bank which processes them as collection items like maturing treasury bills and presents the warrants to the government entity's Treasury Department for payment each business day.

## **Payroll Outsourcing**

Businesses may decide to outsource their payroll functions to an outsourcing service like a payroll bureau or a fully managed payroll service. These can normally reduce the costs involved in having payroll trained employees in-house as well as the costs of systems and software needed to process payroll. Within the United States, business payrolls are complicated in that taxes must be filed consistently and accurately to applicable regulatory agencies. Restaurant payrolls which typically include tip calculations, deductions, garnishments and other variables can be extremely difficult to manage especially for new or small business owners.

In the UK, payroll bureaus will deal with all HM Revenue & Customs enquiries and deal with employee's queries. Payroll bureaus also produce reports for the businesses' account department and payslips for the employees and can also make the payments to the employees if required.

Another reason many businesses outsource is because of the ever increasing complexity of payroll legislation. Annual changes in tax codes, PAYE and National Insurance bands as well as more and more statutory payments and deductions having to go through the payroll often mean there is a lot to keep abreast of in order to maintain compliance with the current legislation.

## 9. EMPLOYEE BENEFITS

**Employee benefits** are **benefits in kind** (also called **fringe benefits**, they are non-wage compensations provided to employees in addition to their normal wages or salaries. Where an employee exchanges (cash) wages for some other form of benefit, this is generally referred to as a 'salary sacrifice' arrangement. In most countries, most kinds of employee benefits are taxable to at least some degree.

Some of these benefits are: housing (employer-provided or employer-paid), group insurance (health, dental, life etc.), disability income protection, retirement benefits, daycare, tuition reimbursement, sick leave, vacation (paid and non-paid), social security, profit sharing, funding of education, and other specialized benefits.

The purpose of the benefits is to increase the economic security of employees.

The term **perks** is often used colloquially to refer to those benefits of a more discretionary nature. Often, perks are given to employees who are doing notably well and/or have seniority. Common perks are take-home vehicles, hotel stays, free refreshments, leisure activities on work time (golf, etc.), stationery, allowances for lunch, and—when multiple choices exist—first choice of such things as job assignments and vacation scheduling. They may also be given first chance at job promotions when vacancies exist.

### United States

Employee benefits in the United States might include relocation assistance; medical, prescription, vision and dental plans; health and dependent care flexible spending accounts; retirement benefit plans (pension, 401(k), 403(b)); group-term life and long term care insurance plans; legal assistance plans; adoption assistance; child care benefits; transportation benefits; and possibly other miscellaneous employee discounts (*e.g.*, movies and theme park tickets, wellness programs, discounted shopping, hotels and resorts, and so on).

Some fringe benefits (for example, accident and health plans, and group-term life insurance coverage up to US\$50,000) may be excluded from the employee's gross income and, therefore, are not subject to federal income tax in the United States. Some function as tax shelters (for example, flexible spending accounts, 401(k)'s, 403(b)'s). Fringe benefits are also thought of as the costs of keeping employees other

than salary. These benefit rates are typically calculated using fixed percentages that vary depending on the employee's classification and often change from year to year.

Normally, employer provided benefits are tax-deductible to the employer and non-taxable to the employee. The exception to the general rule includes certain executive benefits (e.g. golden handshake and golden parachute plans).

American corporations may also offer cafeteria plans to their employees. These plans would offer a menu and level of benefits for employees to choose from. In most instances, these plans are funded by both the employees and by the employer(s). The portion paid by the employees are deducted from their gross pay before federal and state taxes are applied.

## **United Kingdom**

In the UK, Employee Benefits are categorised by three terms: Flexible Benefits (Flex) and Flexible Benefits Packages, Voluntary Benefits and Core Benefits.

Flexible Benefits, usually called a "Flex Scheme", is where employees are allowed to choose how a proportion of their remuneration is paid. Currently around a quarter of UK employers operate such a scheme. This is normally delivered by allowing employees to sacrifice part of their pre-tax pay in exchange for a car, additional holiday, a shorter working week or other similar benefits, or give up benefits for additional cash remuneration. A number of external consultancies exist that enable organizations to manage Flex packages and they centre around the provision of an Intranet or Extranet website where employees can view their current flexible benefit status and make changes to their package. Adoption of flexible benefits has grown considerably over the five years to 2008, with The Chartered Institute of Personnel and Development additionally anticipating a further 12% rise in adoption within 2008/9. This has coincided with increased employee access to the internet and studies suggesting that employee engagement can be boosted by their successful adoption.

Core Benefits is the term given to benefits which all staff enjoy, such as holiday, sick pay and sometimes flexible hours.

In recent years many UK companies have used the tax and national insurance savings gained through the implementation of salary sacrifice benefits to fund the implementation of flexible benefits. In a salary sacrifice arrangement an employee gives up the right to part of the cash remuneration due under their contract of employment. Usually the sacrifice is made in return for the employer's agreement to provide them with some form of non-cash benefit. The most popular types of salary sacrifice benefits include childcare vouchers and pensions.

## **Advantages of employee benefits**

There are a number of advantages to employee benefits for both employer and employee.



## Employer advantages

- Helps attract and retain better qualified employees.
- Provides high risk coverage at low costs easing the company's financial burden.
- Improves efficiency and productivity as employees are assured of security for themselves and their families.
- Premiums are tax deductible as corporation expense, which means savings with quality coverage.

## Employee advantages

- Peace of mind leading to better productivity as employees are assured of provision for themselves and families in any mishap.
- Employees with personal life insurance enjoy additional protection
- Confidence in company's EB schemes boost staff morale and pride in company
- Employees enjoy cheaper rates negotiated through their employer than they could obtain as an individual

## Employee disadvantages

In the UK these benefits are often taxed at the individuals normal tax rate which can prove expensive if there is no financial advantage to the individual from the benefit.

## 10. PERFORMANCE APPRAISAL

**Performance appraisal**, also known as **employee appraisal**, is a method by which the job performance of an employee is evaluated (generally in terms of quality, quantity, cost and time). Performance appraisal is a part of career development, also known as **employee appraisal**, is a method by which the job performance of an employee is evaluated (generally in terms of quality, quantity, cost and time). Performance appraisal is a part of career development.

Performance appraisals are regular reviews of employee performance within organizations

Generally, the aims of a performance appraisal are to:

- Give feedback on performance to employees.
- Identify employee training needs.
- Document criteria used to allocate organizational rewards.
- Form a basis for personnel decisions: salary increases, promotions, disciplinary actions, etc.
- Provide the opportunity for organizational diagnosis and development.
- Facilitate communication between employee and administration
- Validate selection techniques and human resource policies to meet federal Equal Employment Opportunity requirements.

A common approach to assessing performance is to use a numerical or scalar rating system whereby managers are asked to score an individual against a number of objectives/attributes. In some companies, employees receive assessments from their manager, peers, subordinates and customers while also performing a self assessment. This is known as 360° appraisal. forms good communication patterns

The most popular methods that are being used as performance appraisal process are:

- Management by objectives
- 360 degree appraisal
- Behavioral Observation Scale
- Behaviorally Anchored Rating Scale

Trait based systems, which rely on factors such as integrity and conscientiousness, are also commonly used by businesses. The scientific literature on the subject provides evidence that assessing employees on factors such as these should be avoided. The reasons for this are two-fold:

1) Because trait based systems are by definition based on personality traits, they make it difficult for a manager to provide feedback that can cause positive change in employee performance. This is caused by the fact that personality dimensions are for the most part static, and while an employee can change a specific behavior they cannot change their personality. For example, a person who lacks integrity may stop lying to a manager because they have been caught, but they still have low integrity and are likely to lie again when the threat of being caught is gone.

2) Trait based systems, because they are vague, are more easily influenced by office politics, causing them to be less reliable as a source of information on an employee's true performance. The vagueness of these instruments allows managers to fill them out based on who they want to/feel should get a raise, rather than basing scores on specific behaviors employees should/should not be engaging in. These systems are also more likely to leave a company open to discrimination claims because a manager can make biased decisions without having to back them up with specific behavioral information.

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<b>Course Name</b>	<b>: Communication Skills</b>
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### **Course Description**

The Course defines different perspectives of communication, its types and overview of the process of communicating, issues involved in public relations, its methods and tactics, advertising and its forms, having strategic communication, and above all the importance of having organizational communication to enhance the business setting.

### **Course objectives**

- To enable students acquire different communications skills relevant in the labor market/organizational setting.
- To assist students in developing competency in the fundamentals of business writing, reporting and research.
- To help them understand the most common barriers to communication as well as their remedies.

### **Course Content**

#### **Introduction**

- Definition of Communication
- Overview of Communication
- Types of Communication
- Communication as an academic discipline

#### **Public Relations**

- Definition of Public relations
- Methods, tools and tactics of public relations
- Politics and civil society
- Media relations key elements of strategy-based media relations

#### **Advertising**

- Definition of advertising
- Forms of advertising
- Criticism of advertising
- Communication design

#### **Strategic Communication**

- Definition of strategic communication
- History of strategic Communication
- Application objectives
- Defence application
- Public administration application

#### **Organizational Communication**

- History of Organizational Communication
- Assumption underlying organizational communication
- Communication networks
- Direction of communication
- Organizational theory

#### **Other related topics**

- Easy ways to bring fun back to work

- How to ensure that your written message gets a reply
- How to respond to angry customers
- How to lose a customer in two steps or less
- Customer service skills that make a big difference

**Mode of delivery** Face to face lectures

### Assessment

**Coursework** 40%

**Exams** 60%

**Total Mark** 100%

### Introduction

**Communication** is the process of generation, transmission, or reception of messages to oneself or another entity, usually via a mutually understood set of signs.

### The following outline is provided as an overview of and Communication

**Communication** is a process of transferring information from one entity to another. Communication processes are sign-mediated interactions between at least two agents which share a repertoire of signs and semiotic rules. Communication is commonly defined as "the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs". Although there is such a thing as one-way communication, communication can be perceived better as a two-way process in which there is an exchange and progression of thoughts, feelings or ideas (energy) towards a mutually accepted goal or direction (information).

### Overview

Communication are a process whereby information is enclosed in a package and is discretized and imparted by sender to a receiver via a channel/medium. The receiver then decodes the message and gives the sender a feedback. Communication requires that all parties have an area of communicative commonality. There are auditory means, such as speech, song, and tone of voice, and there are nonverbal means, such as body language, sign language, paralanguage, touch, eye contact, and writing.

Communication is thus a process by which we assign and convey meaning in an attempt to create shared understanding. This process requires a vast repertoire of skills in intrapersonal and interpersonal processing, listening, observing, speaking, questioning, analyzing, and evaluating. It is through communication that collaboration and cooperation occur.<sup>[2]</sup>.....

There are also many common barriers to successful communication, two of which are **message overload** (when a person receives too many messages at the same time), and **message complex**. Communication is a continuous process.

## **Types of communication**

There are three major parts in human face to face communication which are body language, voice tonality, and words. According to the research:

- 55% of impact is determined by body language—postures, gestures, and eye contact,
- 38% by the tone of voice, and
- 7% by the content or the words used in the communication process.

Although the exact percentage of influence may differ from variables such as the listener and the speaker, communication as a whole strives for the same goal and thus, in some cases, can be universal. System of signals, such as voice sounds, intonations or pitch, gestures or written symbols which communicate thoughts or feelings. If a language is about communicating with signals, voice, sounds, gestures, or written symbols, can animal communications be considered as a language? Animals do not have a written form of a language, but use a language to communicate with each another. In that sense, an animal communication can be considered as a separate language.

Human spoken and written languages can be described as a system of symbols (sometimes known as lexemes) and the grammars (rules) by which the symbols are manipulated. The word "language" is also used to refer to common properties of languages. Language learning is normal in human childhood. Most human languages use patterns of sound or gesture for symbols which enable communication with others around them. There are thousands of human languages, and these seem to share certain properties, even though many shared properties have exceptions.

There is no defined line between a language and a dialect, but the linguist Max Weinreich is credited as saying that "a language is a dialect with an army and a navy". Constructed languages such as Esperanto, programming languages, and various mathematical formalisms are not necessarily restricted to the properties shared by human languages.

## **Nonverbal communication**

Nonverbal communication is the process of communicating through sending and receiving wordless messages. Such messages can be communicated through gesture, body language or posture; facial expression and eye contact, object communication such as clothing, hairstyles or even architecture, or symbols and infographics, as well as through an aggregate of the above, such as behavioral communication. Nonverbal communication plays a key role in every person's day to day life, from employment to romantic engagements.

Speech may also contain nonverbal elements known as paralanguage, including voice quality, emotion and speaking style, as well as prosodic features such as rhythm, intonation and stress. Likewise, written texts have nonverbal elements such as handwriting style, spatial arrangement of words, or the use of emoticons. A

portmanteau of the English words emotion (or emote) and icon, an emoticon is a symbol or combination of symbols used to convey emotional content in written or message form.

Other communication channels such as telegraphy fit into this category, whereby signals travel from person to person by an alternative means. These signals can in themselves be representative of words, objects or merely be state projections. Trials have shown that humans can communicate directly in this way without body language, voice tonality or words.

**Categories and Features** G. W. Porter divides non-verbal communication into four broad categories:

**Physical.** This is the personal type of communication. It includes facial expressions, tone of voice, sense of touch, sense of smell, and body motions.

**Aesthetic.** This is the type of communication that takes place through creative expressions: playing instrumental music, dancing, painting and sculpturing.

**Signs.** This is the mechanical type of communication, which includes the use of signal flags, the 21-gun salute, horns, and sirens.

**Symbolic.** This is the type of communication that makes use of religious, status, or ego-building symbols.

### **Static Features**

**Distance.** The distance one stands from another frequently conveys a non-verbal message. In some cultures it is a sign of attraction, while in others it may reflect status or the intensity of the exchange.

**Orientation.** People may present themselves in various ways: face-to-face, side-to-side, or even back-to-back. For example, cooperating people are likely to sit side-by-side while competitors frequently face one another.

**Posture.** Obviously one can be lying down, seated, or standing. These are not the elements of posture that convey messages. Are we slouched or erect? Are our legs crossed or our arms folded? Such postures convey a degree of formality and the degree of relaxation in the communication exchange.

**Physical Contact.** Shaking hands, touching, holding, embracing, pushing, or patting on the back all convey messages. They reflect an element of intimacy or a feeling of (or lack of) attraction.

### **Dynamic Features**

**Facial Expressions.** A smile, frown, raised eyebrow, yawn, and sneer all convey information. Facial expressions continually change during interaction and are

monitored constantly by the recipient. There is evidence that the meaning of these expressions may be similar across cultures.

**Gestures.** One of the most frequently observed, but least understood, cues is a hand movement. Most people use hand movements regularly when talking. While some gestures (e.g., a clenched fist) have universal meanings, most of the others are individually learned and idiosyncratic.

**Looking.** A major feature of social communication is eye contact. It can convey emotion, signal when to talk or finish, or aversion. The frequency of contact may suggest either interest or boredom.

## **Visual communication**

Visual communication as the name suggests is communication through visual aid. It is the conveyance of ideas and information in forms that can be read or looked upon. Primarily associated with two dimensional images, it includes: signs, typography, drawing, graphic design, illustration, color and electronic resources. It solely relies on vision. It is form of communication with visual effect. It explores the idea that a visual message with text has a greater power to inform, educate or persuade a person. It is communication by presenting information through visual form.

The evaluation of a good visual design is based on measuring comprehension by the audience, not on aesthetic or artistic preference. There are no universally agreed-upon principles of beauty and ugliness. There exists a variety of ways to present information visually, like gestures, body languages, video and TV. Here, focus is on the presentation of text, pictures, diagrams, photos, et cetera, integrated on a computer display. The term visual presentation is used to refer to the actual presentation of information. Recent research in the field has focused on web design and graphically oriented usability. Graphic designers use methods of visual communication in their professional .

## **Oral Communication**

The first step in planning an oral presentation involves acknowledging two fundamental differences between oral and written communication. One essential goal of oral communication is to make personal contact with the audience, and to help connect them to the content. Reading a written report aloud is not usually an effective strategy for engaging with the audience. The needs/preferences of the audience play an even larger role in oral presentations than in writing. The content of presentations should be prepared with this goal in mind. Second, oral presentations are fleeting (or time-sensitive). If readers get lost or stop paying attention for a few minutes, they can always flip back a few pages. Listeners, on the other hand, usually can't interrupt the speaker and ask that s/he start again and go back a few minutes. Once words are uttered, they vanish. Presenters can account for the fleeting nature of oral presentations by making sure that the presentation is well organized and by making structure explicit in the talk, so the audience can always know where they've been and where they're going



## Communication modeling

Communication is usually described along a few major dimensions: Content (what type of things are communicated), source / sender / encoder (by whom), form (in which form), channel (through which medium), destination / receiver / target / decoder (to whom), and the purpose or pragmatic aspect. Between parties, communication includes acts that confer knowledge and experiences, give advice and commands, and ask questions. These acts may take many forms, in one of the various manners of communication. The form depends on the abilities of the group communicating. Together, communication content and form make messages that are sent towards a destination. The target can be oneself, another person or being, another entity (such as a corporation or group of beings).

Communication can be seen as processes of information transmission governed by three levels of semiotic rules:

1. Syntactic (formal properties of signs and symbols),
2. Pragmatic (concerned with the relations between signs/expressions and their users) and
3. Semantic (study of relationships between signs and symbols and what they represent).

Therefore, communication is social interaction where at least two interacting agents share a common set of signs and a common set of semiotic rules. This commonly held rules in some sense ignores auto communication, including intrapersonal communication via diaries or self-talk, both secondary phenomena that followed the primary acquisition of communicative competences within social interactions.

In a simple model, information or content (e.g. a message in natural language) is sent in some form (as spoken language) from a sender/ encoder to a destination/ receiver/ decoder. In a slightly more complex form a sender and a receiver are linked reciprocally. A particular instance of communication is called a speech act. The sender's personal filters and the receiver's personal filters may vary depending upon different regional traditions, cultures, or gender; which may alter the intended meaning of message contents. In the presence of "communication noise" on the transmission channel (air, in this case), reception and decoding of content may be faulty, and thus the speech act may not achieve the desired effect. One problem with this encode-transmit-receive-decode model is that the processes of encoding and decoding imply that the sender and receiver each possess something that functions as a code book, and that these two code books are, at the very least, similar if not identical. Although something like code books is implied by the model, they are nowhere represented in the model, which creates many conceptual difficulties.

Theories of co regulation describe communication as a creative and dynamic continuous process, rather than a discrete exchange of information. Canadian media scholar Harold Innis had the theory that people use different types of media to communicate and which one they choose to use will offer different possibilities for the shape and durability of society (Wark, McKenzie 1997). His famous example of this is using ancient Egypt and looking at the ways they built themselves out of

media with very different properties stone and papyrus. Papyrus is what he called '**Space Binding**'. it made possible the transmission of written orders across space, empires and enables the waging of distant military campaigns and colonial administration. The other is stone and '**Time Binding**', through the construction of temples and the pyramids can sustain their authority generation to generation, through this media they can change and shape communication in their society (Wark, McKenzie 1997).

The Krishi Vigyan Kendra Kannur under Kerala Agricultural University has pioneered a new branch of agricultural communication called Creative Extension.

## **Communication as academic discipline**

Communication as an academic discipline, sometimes called "communicology, relates to all the ways we communicate, so it embraces a large body of study and knowledge. The communication discipline includes both verbal and nonverbal messages. A body of scholarship all about communication is presented and explained in textbooks, electronic publications, and academic journals. In the journals, researchers report the results of studies that are the basis for an ever-expanding understanding of how we all communicate.

Communication happens at many levels (even for one single action), in many different ways, and for most beings, as well as certain machines. Several, if not all, fields of study dedicate a portion of attention to communication, so when speaking about communication it is very important to be sure about what aspects of communication one is speaking about. Definitions of communication range widely, some recognizing that animals can communicate with each other as well as human beings, and some are more narrow, only including human beings within the parameters of human symbolic interaction.

## **Public relations**

**Public relations (PR)** is the practice of managing the communication between an organization and its publics. Public relations gains an organization or individual exposure to their audiences using topics of public interest and news items that do not require direct payment. Because public relations places exposure in credible third-party outlets, it offers a third-party legitimacy that advertising does not have. Common activities include speaking at conferences, working with the press, and employee communication. It is something that is not tangible and this is what sets it apart from Advertising.

PR can be used to build rapport with employees, customers, investors, voters, or the general public. Almost any organization that has a stake in how it is portrayed in the public arena employs some level of public relations. There are number of related sister disciplines all falling under the banner of Corporate Communications, such as Analyst relations, Media Relations, Investor Relations, Internal Communications or Labor Relations.

## Definition

The Public Relations Society of America (PRSA) claimed: "According to the PRSA, the essential functions of public relations include research, planning, communications dialogue, action and evaluation.

Edward Louis Bernays, who is considered the founding father of modern public relations along with Ivy Lee, in the early 1900s defined public relations as a "management function which tabulates public attitudes, defines the policies, procedures and interests of an organization... followed by executing a program of action to earn public understanding and acceptance" (see history of public relations).

Today, "Public Relations is a set of management, supervisory, and technical functions that foster an organization's ability to strategically listen to, appreciate, and respond to those persons whose mutually beneficial relationships with the organization are necessary if it is to achieve its missions and values. Essentially it is a management function that focuses on two-way communication and fostering of mutually beneficial relationships between an organization and its publics.

Building and managing relationships with those who influence an organization or individual's audiences has a central role in public relations.

## Methods, tools and tactics

Public relations and publicity are not synonymous but many PR campaigns include provisions for publicity. Publicity is the spreading of information to gain public awareness for a product, person, service, cause or organization, and can be seen as a result of effective PR planning.

## Publics targeting

A fundamental technique used in public relations is to identify the target audience, and to tailor every message to appeal to that audience. It can be a general, nationwide or worldwide audience, but it is more often a segment of a population. Marketers often refer to economy-driven "demographics," such as "black males 18-49," but in public relations an audience is more fluid, being whoever someone wants to reach. For example, recent political audiences include "soccer moms" and "NASCAR dads." There is also a psychographic grouping based on fitness level, eating preferences.

In addition to audiences, there are usually stakeholders, literally people who have a "stake" in a given issue. All audiences are stakeholders (or presumptive stakeholders), but not all stakeholders are audiences. For example, a charity commissions a PR agency to create an advertising campaign to raise money to find a cure for a disease. The charity and the people with the disease are stakeholders, but the audience is anyone who is likely to donate money.

Sometimes the interests of differing audiences and stakeholders common to a PR effort necessitate the creation of several distinct but still complementary messages. This is not always easy to do, and sometimes – especially in politics – a spokesperson or client says something to one audience that angers another audience or group of stakeholders.

## Lobby groups

Lobby groups are established to influence government policy, corporate policy, or public opinion. An example of this is the American Israel Public Affairs Committee, AIPAC, which influences American foreign policy. Such groups claim to represent a particular interest and in fact are dedicated to doing so. When a lobby group hides its true purpose and support base it is known as a front group. Moreover, governments may also lobby public relations firms in order to sway public opinion. A well illustrated example of this is the way civil war in Yugoslavia was portrayed. Governments of newly succeeded republics of Croatia and Bosnia invested heavily with American PR firms, so that the PR firms would give them a positive war image in the US.

## Spin

In public relations, "spin" is sometimes a pejorative term signifying a heavily biased portrayal in one's own favor of an event or situation. While traditional public relations may also rely on creative presentation of the facts, "spin" often, though not always, implies disingenuous, deceptive and/or highly manipulative tactics. Politicians are often accused of spin by commentators and political opponents, when they produce a counter argument or position.

The techniques of "spin"s include selectively presenting facts and quotes that support one's position (cherry picking), the so-called "non-denial," phrasing in a way that assumes unproven truths, euphemisms for drawing attention away from items considered distasteful, and ambiguity in public statements. Another spin technique involves careful choice of timing in the release of certain news so it can take advantage of prominent events in the news. A famous reference to this practice occurred when British Government press officer Jo Moore used the phrase *It's now a very good day to get out anything we want to bury*, (widely paraphrased or misquoted as "It's a good day to bury bad news"), in an email sent on September 11, 2001. The furor caused when this email was reported in the press eventually caused her to resign.

## Spin doctor

Skilled practitioners of spin are sometimes called "spin doctors," despite the negative connotation associated with the term. It is the PR equivalent of calling a writer a "hack." Perhaps the most well-known person in the UK often described as a "spin doctor" is Alastair Campbell, who was involved with Tony Blair's public relations between 1994 and 2003, and also played a controversial role as press relations officer to the British and Irish Lions rugby union side during their 2005 tour of New Zealand.

State-run media in many countries also engage in spin by selectively allowing news stories that are favorable to the government while censoring anything that could be considered critical. They may also use propaganda to indoctrinate or actively influence citizens' opinions. Privately run media also uses the same techniques of 'issue' versus 'non-issue' to spin its particular political viewpoints.

## Meet and Greet

Many businesses and organizations will use a Meet and Greet as a method of introducing two or more parties to each other in a comfortable setting. These will generally involve some sort of incentive, usually food catered from restaurants, to encourage employees or members to participate.

There are opposing schools of thought as to how the specific mechanics of a Meet and Greet operate. The Gardiner school of thought states that unless specified as an informal event, all parties should arrive promptly at the time at which the event is scheduled to start. The Kolanowski school of thought, however, states that parties may arrive at any time after the event begins, in order to provide a more relaxed interaction environment.

## Politics and civil society

### Defining the opponent

A tactic used in political campaigns is known as "defining one's opponent." Opponents can be candidates, organizations and other groups of people.

In the 2004 US presidential campaign, Howard Dean defined John Kerry as a "flip-flopper," which was widely reported and repeated by the media, particularly the conservative media. Similarly, George H.W. Bush characterized Michael Dukakis as weak on crime (the Willie Horton ad) and hopelessly liberal ("a card-carrying member of the ACLU"). In 1996, President Bill Clinton seized upon opponent Bob Dole's promise to take America back to a simpler time, promising in contrast to "build a bridge to the 21st century." This painted Dole as a person who was somehow opposed to progress.

In the debate over abortion, self-titled pro-choice groups, by virtue of their name, defined their opponents as "anti-choice", while self-titled pro-life groups refer to their opponents as "pro-abortion" or "anti-life".

### Managing language

If a politician or organization can use an apt phrase in relation to an issue, such as in interviews or news releases, the news media will often repeat it verbatim, without questioning the aptness of the phrase. This perpetuates both the message and whatever preconceptions might underlie it. Often, something innocuous sounding can stand in for something greater; a "culture of life" sounds like general goodwill to most people, but will evoke opposition to abortion for many pro-life advocates. The

phrase "States' rights" was used as a code for anti-civil rights legislation in the United States in the 1960s, and, allegedly, the 70s, and 80s.

## Conveying the message

The method of communication can be as important as a message. Direct mail, advertising and public speaking are used depending upon the intended audience and the message that is conveyed. Press releases are also used, but since many newspapers are folding, they have become a less reliable way of communicating, and other methods have become more popular.

Arts organizations have begun to rely more on their own websites and have developed a variety of unique approaches to publicity and public relations, on and off the web.

## Front groups

One of the most controversial practices in public relations is the use of front groups – organizations that purport to serve a public cause while actually serving the interests of a client whose sponsorship may be obscured or concealed. Critics of the public relations industry, such as PR Watch, have contended that Public Relations involves a "multi-billion dollar propaganda-for-hire industry" that "concoct[s] and spin[s] the news, organize[s] phony 'grassroots' front groups, spy on citizens, and conspire[s] with lobbyists and politicians to thwart democracy."

Instances of the use of front groups as a PR technique have been documented in many industries. Coal mining corporations have created environmental groups that contend that increased CO2 emissions and global warming will contribute to plant growth and will be beneficial, trade groups for bars have created and funded citizens' groups to attack anti-alcohol groups, tobacco companies have created and funded citizens' groups to advocate for tort reform and to attack personal injury lawyers, while trial lawyers have created "consumer advocacy" front groups to oppose tort reform.

## Media relations

**Media relations** involves working with various media for the purpose of informing the public of an organization's mission, policies and practices in a positive, consistent and credible manner. Typically, this means coordinating directly with the people responsible for producing the news and features in the mass media. The goal of media relations is to maximize positive coverage in the mass media without paying for it directly through advertising.

Many people use the terms *public relations* and *media relations* interchangeably; however, doing so is incorrect. Media relations refer to the relationship that a company or organization develops with journalists, while public relations extend that relationship beyond the media to the general public.

Dealing with the media presents unique challenges in that the news media cannot be controlled — they have ultimate control over whether stories pitched to them are of interest to their audiences. Because of this, ongoing relationships between an organization and the news media is vital. One way to ensure a positive working relationship with media personnel is to become deeply familiar with their "beats" and areas of interests. Media relations and public relations practitioners should read as many magazines, journals, newspapers, and blogs as possible, as they relate to one's practice.

Working with the media on the behalf of an organization allows for awareness of the entity to be raised as well as the ability to create an impact with a chosen audience. It allows access to both large and small target audiences and helps build public support and mobilizing public opinion for an organization This is all done through a wide range of media and can be used to encourage two-way communication.

### **Key elements of strategy-based media relations**

- The media strategy is documented and implemented according to principles agreed to by public affairs and senior management.
- A media policy is drawn up with responsibilities, profiles and positioning.
- Media activity is planned to reach target audiences in direct support of your organizational mission and goals.
- Media contact is broadly divided into proactive and reactive activities.
- Systematic use of consistent messages is made (e.g., about organizational performance, issues, use of new technologies and corporate behavior including environmental policy, corporate governance and corporate social responsibility).
- Spokespersons' roles are documented, communicated and supported.
- There are clear triggers for engagement as part of the issues management – stakeholder relations process.
- Decisions are agreed to beforehand with respect to follow-up activities after media coverage



**Advertising** is a form of communication used to influence individuals to purchase products or services or support political candidates or ideas. Frequently it communicates a message that includes the name of the product or service and how that product or service could potentially benefit the consumer. Advertising often attempts to persuade potential customers to purchase or to consume a particular brand of product or service. Modern advertising developed with the rise of mass production in the late 19th and early 20th centuries.

Commercial advertisers often seek to generate increased consumption of their products or services through branding, which involves the repetition of an image or product name in an effort to associate related qualities with the brand in the minds of consumers. Different types of media can be used to deliver these messages, including traditional media such as newspapers, magazines, television, radio,

billboards or direct mail. Advertising may be placed by an advertising agency on behalf of a company or other organization.

Organizations that spend money on advertising promoting items other than a consumer product or service include political parties, interest groups, religious organizations and governmental agencies. Non-profit organizations may rely on free modes of persuasion, such as a public service announcement.

Money spent on advertising has increased in recent years. In 2007, spending on advertising was estimated at more than \$150 billion in the United States and \$385 billion worldwide, and the latter to exceed \$450 billion by 2010.

Advertising is communication used to influence individuals to purchase products or services or support political candidates or ideas. Advertising can be displayed on billboards, newspapers, T.V., websites, movies and more.

### **Public service advertising**

The same advertising techniques used to promote commercial goods and services can be used to inform, educate and motivate the public about non-commercial issues, such as HIV/AIDS, political ideology, energy conservation and deforestation.

Advertising, in its non-commercial guise, is a powerful educational tool capable of reaching and motivating large audiences. "Advertising justifies its existence when used in the public interest - it is much too powerful a tool to use solely for commercial purposes." - Attributed to Howard Gossage by David Ogilvy.

Public service advertising, non-commercial advertising, public interest advertising, cause marketing, and social marketing are different terms for (or aspects of) the use of sophisticated advertising and marketing communications techniques (generally associated with commercial enterprise) on behalf of non-commercial, public interest issues and initiatives.

In the United States, the granting of television and radio licenses by the FCC is contingent upon the station broadcasting a certain amount of public service advertising. To meet these requirements, many broadcast stations in America air the bulk of their required public service announcements during the late night or early morning when the smallest percentage of viewers are watching, leaving more day and prime time commercial slots available for high-paying advertisers.

Public service advertising reached its height during World Wars I and II under the direction of several governments.

### **Radio advertising**

Radio advertising is a form of advertising via the medium of radio.



Radio advertisements are broadcasted as radio waves to the air from a transmitter to an antenna and a thus to a receiving device. Airtime is purchased from a station or network in exchange for airing the commercials. While radio has the obvious limitation of being restricted to sound, proponents of radio advertising often cite this as an advantage

### **Print advertising**

Print advertising describes advertising in a printed medium such as a newspaper, magazine, or trade journal. This encompasses everything from media with a very broad readership base, such as a major national newspaper or magazine, to more narrowly targeted media such as local newspapers and trade journals on very specialized topics. A form of print advertising is classified advertising, which allows private individuals or companies to purchase a small, narrowly targeted ad for a low fee advertising a product or service.

### **Online advertising**

Online advertising is a form of promotion that uses the Internet and World Wide Web for the expressed purpose of delivering marketing messages to attract customers. Examples of online advertising include contextual ads on search engine results pages, banner ads, Rich Media Ads, Social network advertising, online classified advertising, advertising networks and e-mail marketing, including e-mail spam.

### **Billboard advertising**

Billboards are large structures located in public places which display advertisements to passing pedestrians and motorists. Most often, they are located on main roads with a large amount of passing motor and pedestrian traffic; however, they can be placed in any location with large amounts of viewers, such as on mass transit vehicles and in stations, in shopping malls or office buildings, and in stadiums.

### **In-store advertising**

In-store advertising is any advertisement placed in a retail store. It includes placement of a product in visible locations in a store, such as at eye level, at the ends of aisles and near checkout counters, eye-catching displays promoting a specific product, and advertisements in such places as shopping carts and in-store video displays.

### **Criticism of advertising**

While advertising can be seen as necessary for economic growth, it is not without social costs. Unsolicited Commercial Email and other forms of spam have become so prevalent as to have become a major nuisance to users of these services, as well as being a financial burden on internet service providers. Advertising is increasingly invading public spaces, such as schools, which some critics argue is a form of child exploitation. In addition, advertising frequently uses psychological pressure (for

example, appealing to feelings of inadequacy) on the intended consumer, which may be harmful.

## **Advertising and constitutional rights**

Advertising is equated with constitutionally guaranteed freedom of opinion and speech. Therefore criticizing advertising or any attempt to restrict or ban advertising is almost always considered to be an attack on fundamental rights (First Amendment in the USA) and meets the combined and concentrated resistance of the business and especially the advertising community.

## **The price of attention and hidden costs**

Advertising has developed into a billion-dollar business on which many depend. In 2006 391 billion US dollars were spent worldwide for advertising. In Germany, for example, the advertising industry contributes 1.5% of the gross national income; the figures for other developed countries are similar. Thus, advertising and growth are directly and causally linked. As far as a growth based economy can be blamed for the harmful human lifestyle (affluent society) advertising has to be considered in this aspect concerning its negative impact, because its main purpose is to raise consumption. "The industry is accused of being one of the engines powering a convoluted economic mass production system which promotes consumption."

## **Children and adolescents as target groups**

The children's market, where resistance to advertising is weakest, is the "pioneer for ad creep" "Kids are among the most sophisticated observers of ads. They can sing the jingles and identify the logos, and they often have strong feelings about products. What they generally don't understand, however, are the issues that underlie how advertising works. Mass media are used not only to sell goods but also ideas: how we should behave, what rules are important, who we should respect and what we should value. Youth is increasingly reduced to the role of a consumer. Not only the makers of toys, sweets, ice cream, breakfast food and sport articles prefer to aim their promotion at children and adolescents. For example, an ad for a breakfast cereal on a channel aimed at adults will have music that is a soft ballad, whereas on a channel aimed at children, the same ad will use a catchy rock jingle of the same song to aim at kids. Advertising for other products preferably uses media with which they can also reach the next generation of consumers. "Key advertising messages exploit the emerging independence of young people". Cigarettes, for example, "are used as a fashion accessory and appeal to young women. Other influences on young people include the linking of sporting heroes and smoking through sports sponsorship, the use of cigarettes by popular characters in television programmes and cigarette promotions. Research suggests that young people are aware of the most heavily advertised cigarette brands."

"Product placements show up everywhere, and children aren't exempt. Far from it. The animated film, Foodfight, had 'thousands of products and character icons from the familiar (items) in a grocery store.' Children's books also feature branded items and characters, and millions of them have snack foods as lead characters. Business

is interested in children and adolescents because of their buying power and because of their influence on the shopping habits of their parents. As they are easier to influence they are especially targeted by the advertising business. "The marketing industry is facing increased pressure over claimed links between exposure to food advertising and a range of social problems, especially growing obesity levels."

d 15% in magazines. In 2002 there were 360.000 people employed in the advertising business. The internet revenues for advertising doubled to almost 1 billion Euros from 2006 to 2007, giving it the highest growth rates

## Communication design

**Communication design** is a mixed discipline between design and information-development which is concerned with how media intermission such as printed, crafted, electronic media or presentations communicate with people. A communication design approach is not only concerned with developing the message aside from the aesthetics in media, but also with creating new media channels to ensure the message reaches the target audience.

Communication design seeks to attract, inspire, create desires and motivate the people to respond to messages, with a view to making a favorable impact to the bottom line of the commissioning body, which can be either to build a brand, move sales, or for humanitarian purposes. Its process involves strategic business thinking, utilizing market research, creativity, and problem-solving.

The term communication design is often used interchangeably with visual communication and more specifically visual design, but has an alternate broader meaning that includes auditory, vocal, touch and smell. Examples of Communication Design include information architecture, editing, typography, illustration, web design, animation, advertising, ambient media, visual identity design, performing arts, copywriting and professional writing skills applied in the creative industries.

## Visual design

**Visual Design** is the design working in any media or support of visual communication. This is a correct terminology to cover all types of design applied in communication that uses visual channel for transmission of messages, precisely because this term relate to the concept of visual language of some media and not limited to support a particular form of production, as do the terms graphic design (graphic) or Interface design (electronic media).

## Internal communications

**Internal communications** is a generic expression for all communication (formal and informal) that an organisation undertakes with its close stakeholders — i.e. those people with whom it has a relationship that requires support, principally

direct/indirect employees and/or members. The main purpose of formal internal communications is to inform employees or members of the direction and performance of the organisation (and/or team) to which they belong.

The profession of internal communications builds on fundamental principles of other disciplines like human resources (HR), marketing, project management and media planning. As a result it often gets adopted in organisations under different labels: employee communications, employee engagement, internal marketing, company communications, staff communication, etc. Responsibility can also reside within different functions: marketing, corporate communications, transformation, HR, CEO office, etc.

In common with other communication professions, there are different areas of specialism within internal communications: channel management, speech-writing, change communications, HR communications, project communications, event management, social media, intranets, etc.

## Internal communication in practice

Why does internal communication matter?

- **Clear Line of Sight**

At the most basic level internal communication helps make a difference to organisations by providing clarity of purpose that help people do their jobs.

- **Employee Engagement**

Effective internal communications is one of the key drivers of employee engagement which has been widely researched and proven to add significant value to organisations on all metrics from productivity to customer research.

- **External reputation**

Market researchers MOR have highlighted the strength of employee advocacy in shaping an organisation's external reputation. Joep Cornelissen in his book *Corporate Communications* touches on the relationship between reputation and internal conversation.

- **Change management**

Communication is also a critical success factor for change or transformation programmes. (John Kotter says: "When the environment constantly changes, the organization must innovate to adapt to or control that environment. When your external environment changes, your internal environment should adjust as well, and internal communication is vital during these times.")

- **Regulation and compliance**

There is also in many countries a legal requirement that certain communications take place. For example within the EU, employers are

expected to hold consultations with their staff on business decisions that affect them, like redundancy. Effective communications is essential for ensuring compliance with companies' policies on corporate governance, occupational safety and health, environment and quality assurance.

## Internal communication strategy

There are two sides to strategy in internal communications. In the first instance there is the organisation's strategy — what it hopes to achieve and how it plans to go about achieving it. That strategy will be supported and, to some extent, delivered through effective internal communications.

In this context internal communication can help on several different levels:

- **Tell:** simply informing people of the direction, non-negotiable
- **Sell:** anticipating some form of backlash, requiring some persuasion
- **Consult:** seeking specific areas of input to the decision-making process
- **Involve:** seeking varying degrees of involvement and co-creation

Secondly, and more importantly, internal communications needs a strategy of its own. It should be positioned more than a simple plan of tactical interventions in support of business activities. The strategy should consider the following:

- **Market:** What does the organisation know about its audiences' needs? How should its audiences be segmented?
- **Message:** What is it the organisation's message is trying to achieve? In what tone should it be conveyed?
- **Media:** Which channels work best for the different audience segments? How will it maximise reach and cut-through? Are there clear editorial guidelines for each?
- **Measurement:** Are there clearly defined success criteria? What are the leading and lagging measures? As well as informing all of the other three M's, it should be used to demonstrate value and measures of performance (ROI, message penetration, hit rates, quality of feedback, etc)

The strategy will inform the best way to organize effective communications.

## Internal communications functions

Internal communications functions can require several skills, eg: writing, marketing, event organisation, web channels, facilitation, advertising, stakeholder management, corporate social responsibility, branding and communications training.

Internal communicators are a broad church of professionals with both general and specialist skills. Generalist communicators often take on the role of internal communications business partners or consultants, drawing on the support from internal communications specialists who have one or more of the technical skills required to deliver channels (writing, planning, measurement). In practice, the

delineation between these two roles is often blurred but it does highlight the diverse skills required.

### Internal communication channels

The internal communications department should be responsible for developing and maintaining a number of 'channels' that allow effective communication to take place across the business. A communications channel refers to the medium used to convey information from sender to receiver - in this case from organisation to employee. The range and quality of channels differs between organisations, depending on their size and technical infrastructure.

The American political scientist and communication theorist Harold Lasswell popularised the concept of the communication channel in his 1948 paper *The Communication of Ideas* where he proposed a simple five-stage model based around the following question(s):

- Who
- Say what
- In which channel
- To whom
- With what effect?

In reality internal communications is not a linear system and informal channels exist outside the internal pipework of formal communications channels. This is important for those practitioners that (wrongly) believe that internal communications is simply about controlling the message.

### Formal channels

Formal channels typically fall into one of four broad categories:

- **Electronic:** - Communications that are delivered and/or accessed electronically, either by computer, telephone, television or other devices. Examples include email, intranet, video and webcasts, electronic newsletters, podcasts, blogs, Wikis, voicemail, conference calls, SMS text messaging, screensaver messaging, desktop alert messages, desktop news feeds and internal social media tools (eg: internal Twitter-style sites such as Yammer)
- **Print:** - Paper-based communications. Examples include magazines, newsletters, brochures, postcards and other desk drops, posters, memos, communication packs for line managers, etc.
- **Face-to-face:** - One-to-one and one-to-many forums where people are physically present. Examples include team meetings or briefings, conferences, site visits, 'back to the floor', consultation forums, 'brown bag' lunches, round-table discussions, 'town meetings', etc.
- **Workspace:** - the working environment. Examples include notice boards, plasma and LCD screens, accessories (eg: mousemats), window decals, etc.

## Informal channels

These channels reflect the non-linear dynamics of a social network and can be as, if not more, influential than more formal channels. Often informal internal communications is more likely to stimulate and create discussion and dialogue. The channels often manifest themselves via the rumor-mill, water-cooler conversations, social networking, spoof newsletters, etc.

## Selecting channels

One of the key challenges any internal communicator will face is how to select the right channels - and the right mix of channels - for both the audience and the message. The main considerations are:

- **Availability:** what channels either already exist within the organization or can be introduced effectively?
- **Audience:** who are they, where are they based, how do they prefer to access information and how effective will the proposed channel be in reaching them and engaging them?
- **Objectives:** what does the organization want people to learn, think, feel or do as a result of the message?
- **Content:** what is the context and substance of the message? (For example, sensitive messages may need to be communicated face-to-face, rather than by, say, SMS text message.)

## Internal communication audiences

### Audience segmentation

An internal audience is rarely homogeneous. Audiences differ according to the core business or activity of an organization. For example, a manufacturing company may have four main groups:

- **Management:** (*see Line managers section below*)
- **Executives and specialists:** This group is generally office-based and regularly, if not constantly, online. For example, they spend a lot of time creating and sharing information/knowledge both in meetings and online. They interact with their line managers on a regular basis, even if this is virtually by telephone conference, and also give significant credibility to online news and social media.
- **Technical experts and engineers:** This group is often out at customer sites, spending a significant amount of time on manual tasks. For example, they have an office base which they may visit daily or weekly. They are likely to have a laptop and email account but the key difference is they may only check-in to online information sources at specific times. A lot of their direct communication is by telephone. They make good use of physical notice-boards back at base and printed materials such as newsletters.
- **Factory workers:** Even though production lines are highly automated, factory-based employees still spend most of their time on the factory floor, often

working a changing shift pattern. They have limited access to generic online channels, perhaps sharing a computer station to log on to emails and check the intranet. Literacy levels can be low in this audience group which means more emphasis on face-to-face communication and story-telling.

## Line managers

Employee communication is an important skill for all line managers, irrespective of their seniority. Like any skill it requires training and development. Often, organisations do not invest the appropriate amount of time and effort in developing managers' communications skills. Too often this leads to managers abdicating responsibility for communications to their 'internal communications department' and a lack of confidence in facilitating discussion in their teams. This raises debate around the following issues:

- The nature of supervisory relationships and organizational communication
- The potency of managers as a channel of official communications
- How best to support managers in their roles

## Managers as official channels

Although local leaders are undoubtedly a potent force in communications for the reasons explored below – there is little evidence that they hold a supreme position above all other channels of internal communications.

Research findings suggest that employees like to hear from their line manager on subjects in which the manager or supervisor is expert. So, for example employees like their manager to explain how the corporate strategy will affect our team but they don't expect them to be the best source on the detailed analysis behind the strategy. Employees might not naturally look to managers for advice on the workings of the pension scheme.

## Managers as animated notice boards

Sending information down the line to local supervisors, expecting them to deliver it without any corruption, interpretation or deviation has long been the main focus of 'cascaded' internal communications (for example, UK guidance from The Industrial Society, now the [Work Foundation](#), focused on giving managers very clear instructions about what to say and how to say it). However, in recent years thinking has evolved and literature now concentrates on empowering managers to facilitate discussion rather than cascade management of messages which will have little authority or impact. **Arrow approach** – Communications are carefully constructed and aimed at a target audience. It assumes the more accurate the message, the clearer the understanding of the recipient. Problems arise when it is taken for granted that information is mostly transmitted by words and that recipients are passive receptors.

- **Circuit approach** – Communications are achieved with positive relationships and job satisfaction of employees through understanding and discussion. It



assumes that communicating is grounded in mutual understanding. Problems arise because of the myopic view that understanding will lead to agreement and that this understanding should be the sole goal of communications.

- **Dance approach** – Communications are achieved through an intricate combination of the practice, understanding, and intuition. It believes that the communication involves the coordination of meanings, the understanding of common rules, and the recognition of patterns between two or more people.

## Communication theory

There is much discussion in the academic world of communication as to what actually constitutes communication. Currently, many definitions of communication are used in order to conceptualize the processes by which people navigate and assign meaning. Communication is also understood as the exchanging of understanding. Additionally the biocommunication theory investigates communicative processes within and among non-humans such as bacteria, animals, fungi and plants.

We might say that communication consists of transmitting information from one person to another. In fact, many scholars of communication take this as a working definition, and use Lasswell's maxim, "who says what to whom in what channel with what effect," as a means of circumscribing the field of **communication theory**.

A simple communication model with a sender transferring a message containing information to a receiver.

Other commentators suggest that a ritual process of communication exists, one not artificially divorceable from a particular historical and social context.

Communication stands so deeply rooted in human behaviors and the structures of society that scholars have difficulty thinking of it while excluding social or behavioral events. Because communication theory remains a relatively young field of inquiry and integrates itself with other disciplines such as philosophy, psychology, and sociology, one probably cannot yet expect a consensus conceptualization of communication across disciplines.

Currently, there is no paradigm from which communication scholars may work. One of the issues facing scholars is the possibility that establishing a communication metatheory will negate their research and stifle the broad body of knowledge in which communication functions.

The Latin verb *informare*, to give form to, to form an idea of. Furthermore, Latin itself already contained the word *informatio* meaning concept or idea, but the extent to which this may have influenced the development of the word *information* in English is unclear.

As a final note, the ancient Greek word for *form* was "μορφή" (*morf* -> *morphe*, *Morph*) and also *εἶδος* (*eidos* (kind, idea, shape, set), the latter word was famously used in a technical philosophical sense by Plato (and later Aristotle) to denote the

ideal identity or essence of something (see Theory of forms). "Eidos" can also be associated with thought, proposition or even concept.

## **Strategic Communication**

**Strategic Communication** can mean either communicating a concept, a process, or data that satisfies a long term strategic goal of an organization by allowing facilitation of advanced planning, or communicating over long distances usually using international telecommunications or dedicated global network assets to coordinate actions and activities of operationally significant commercial, non-commercial and military business or combat and logistic subunits. It can also mean the related function within organisations that takes care of internal and external communication processes.

## **History of strategic communication**

Strategic communication at its nascent ancient application begun with the first attempts to transmit knowledge through writing either to the following generations, or to locations remote to its origin. The need to increase the distance and speed of transmission may have been one of the factors behind the domestication of the horse which remained the primary mode of communication until the invention of the semaphore, and later the telegraph. The business management reference for Strategic Communication may be the concept of Integrated Management Communication.

## **Definition of strategic communication**

Strategic communication management could be defined as the systematic planning and realization of information flow, communication, media development and image care in a long-term horizon. It conveys deliberate message(s) through the most suitable media to the designated audience(s) at the appropriate time to contribute to and achieve the desired long-term effect. Communication management is process creation. It has to bring three factors into balance: the message(s), the media channel(s) and the audience(s).<sup>[1]</sup> Current multinational concept development and experimentation defines Strategic Communication as "a function to integrate an organisation's information activities in order to advance its interests and objectives, and to promote the coherence of the organisation". (See Peter E. Westenkirchner: Framework Concept "Strategic Communication in Support of Multinational Coalition Operations within a Comprehensive Approach")

## **Application objectives**

Strategic Communication (SC) provides a conceptual umbrella that enables organizations to integrate their disparate messaging efforts. It allows them to create and distribute communications that, while different in style and purpose, have an inner coherence. This consistency can, in some instances, foster an echo chamber that reinforces the organizational message and brand. At minimum, it prevents contradictory, confusing messaging to different groups across all media platforms.

## **Defence application**

The recently approved NATO Policy on Strategic Communication defines Strategic Communication as "the coordinated and appropriate use of NATO communications activities and capabilities – Public Diplomacy, Military Public Affairs, Information Operations and Psychological Operations, as appropriate – in support of Alliance policies, operations and activities, and in order to advance NATO's aims" (SG(2009)0794). "It is important to underline that Strategic Communication is first and foremost a process that supports and underpins all efforts to achieve the Alliance's objectives; an enabler that guides and informs our decisions, and not an organization in itself. It is for this reason that Strategic Communication considerations should be integrated into the earliest planning phases - communication activities being a consequence of that planning" (MCM-0164-2009).

## **Commercial application**

Strategic Communications in Commercial Environment is the non-military application of strategic communication principles and techniques are a new way for organizations to respond to a changed business landscape that results from today's networked communication environment. Back in the day, organizations could segment publics and audiences and target unique messages to each one. Employees, investors, partners, citizens of local communities, potential buyers and consumers could each receive messages that were not widely known or shared by the other groups. Now, all potential publics and audiences can access information about the organization. Providing dissimilar, even contradictory information is no longer possible and may even be problematic. Consumers see information targeted to investors and partners, employees see messages sent to members of the community. In short, with little effort, almost everyone can see almost everything.

Within organizations, the need to integrate communication efforts is moving the authority for creating messages from silos (media relations, investor relations, public relations, advertising, sales and promotion, community relations, corporate training) into corporate headquarters. When organizations adopt strategic communication processes, the message-originating departments -- although they were never fully autonomous -- must report to corporate communications units that issue guidelines for all organizational communication programs and efforts.

The term "strategic communication" means more than just getting the right message to the right people...and so on. It also means ensuring that communication programs meet the objectives of the organization. In order to meet those objectives and to obtain sufficient evidence to suggest that a program can or will meet them, SC is typically supported by a detailed research plan. Once the objectives are clarified, research to define audiences, to measure current attitudes, and to test ways to change those attitudes must be undertaken. Once the coordinating unit develops concepts, there will be focus groups and/or surveys to identify the most effective concepts. Final messages are also tested. The early research that shapes the message is called "formative evaluation." After implementation of the communication program, "summative evaluation" takes place. This research answers the questions:

Did the program reach its goals? What effects did the campaign have? What remains to be done?

Research support for communication programs has long been a facet of advertising and, more broadly, marketing campaigns. In the commercial marketplace, sales are often the measurement for success and failure. In PR, the metric has generally been "clip files," the number of mentions in the editorial press: the more clips and the more influential the publications, the better. The underlying assumptions of strategic communication begin by rejecting these silos and adopting more robust measurements at all stages of program development, implementation, and post-campaign evaluation.

### **Public administration application**

Educational institutions are responding to the perceived need for new ways of planning, developing, and implementing communication programs. In the last two years, a growing number of educational institutions offer programs in strategic communication, usually at the master's level. Prospective students can search the Internet for available programs.

### **Organizational communication**

#### **History of Organizational Communication**

The field traces its lineage through business information, business communication, and early mass communication studies published in the 1930s through the 1950s. Until then, organizational communication as a discipline consisted of a few professors within speech departments who had a particular interest in speaking and writing in business settings. The current field is well established with its own theories and empirical concerns distinct from other communication subfields and other approaches to organizations.

Several seminal publications stand out as works broadening the scope and recognizing the importance of communication in the organizing process, and in using the term "organizational communication". Nobel Laureate Herbert Simon wrote in 1947 about "organization communications systems", saying communication is "absolutely essential to organizations".<sup>[1]</sup>

In the 1950s, organizational communication focused largely on the role of communication in improving organizational life and organizational output. In the 1980s, the field turned away from a business-oriented approach to communication and became concerned more with the constitutive role of communication in organizing. In the 1990s, critical theory influence on the field was felt as organizational communication scholars focused more on communication's possibilities to oppress and liberate organizational members.

### **Assumptions underlying organizational communication**

Some of the main assumptions underlying much of the early organizational communication research were:

- Humans act rationally. Sane people behave in rational ways, they generally have access to all of the information needed to make rational decisions they could articulate, and therefore will make rational decisions, unless there is some breakdown in the communication process.
- Formal logic and empirically verifiable data ought to be the foundation upon which any theory should rest. All we really need to understand communication in organizations is (a) observable and replicable behaviors that can be transformed into variables by some form of measurement, and (b) formally replicable syllogisms that can extend theory from observed data to other groups and settings
- Communication is primarily a mechanical process, in which a message is constructed and encoded by a sender, transmitted through some channel, then received and decoded by a receiver. Distortion, represented as any differences between the original and the received messages, can and ought to be identified and reduced or eliminated.
- Organizations are mechanical things, in which the parts (including employees functioning in defined roles) are interchangeable. What works in one organization will work in another similar organization. Individual differences can be minimized or even eliminated with careful management techniques.
- Organizations function as a container within which communication takes place. Any differences in form or function of communication between that occurring in an organization and in another setting can be identified and studied as factors affecting the communicative activity.

Herbert Simon introduced the concept of **bounded rationality** which challenged assumptions about the perfect rationality of communication participants. He maintained that people making decisions in organizations seldom had complete information, and that even if more information was available, they tended to pick the first acceptable option, rather than exploring further to pick the optimal solution.

Through the 1960s, 1970s and 1980s the field expanded greatly in parallel with several other academic disciplines, looking at communication as more than an intentional act designed to transfer an idea. Research expanded beyond the issue of "how to make people understand what I am saying" to tackle questions such as "how does the act of communicating change, or even define, who I am?", "why do organizations that seem to be saying similar things achieve very different results?" and "to what extent are my relationships with others affected by our various organizational contexts?"

In the early 1990s Peter Senge developed a new theories on Organizational Communication. This theories were learning organization and systems thinking.

These have been well received and are now a mainstay in current beliefs toward organizational communications.

## **Communications networks**

Networks are another aspect of direction and flow of communication. Bavelas has shown that communication patterns, or networks, influence groups in several important ways. Communication networks may affect the group's completion of the assigned task on time, the position of the de facto leader in the group, or they may affect the group members' satisfaction from occupying certain positions in the network. Although these findings are based on laboratory experiments, they have important implications for the dynamics of communication in formal organizations.

There are several patterns of communication:

- "Chain",
- "Wheel",
- "Star",
- "All-Channel" network,
- "Circle"

The Chain can readily be seen to represent the hierarchical pattern that characterizes strictly formal information flow, "from the top down," in military and some types of business organizations. The Wheel can be compared with a typical autocratic organization, meaning one-man rule and limited employee participation. The Star is similar to the basic formal structure of many organizations. The All-Channel network, which is an elaboration of Bavelas's Circle used by Guetzkow, is analogous to the free-flow of communication in a group that encourages all of its members to become involved in group decision processes. The All-Channel network may also be compared to some of the informal communication networks.

If it's assumed that messages may move in both directions between stations in the networks, it is easy to see that some individuals occupy key positions with regard to the number of messages they handle and the degree to which they exercise control over the flow of information. For example, the person represented by the central dot in the "Star" handles all messages in the group. In contrast, individuals who occupy stations at the edges of the pattern handle fewer messages and have little or no control over the flow of information. These "peripheral" individuals can communicate with only one or two other persons and must depend entirely on others to relay their messages if they wish to extend their range.

In reporting the results of experiments involving the Circle, Wheel, and Star configurations, Bavelas came to the following tentative conclusions. In patterns with positions located centrally, such as the Wheel and the Star, an organization quickly develops around the people occupying these central positions. In such patterns, the organization is more stable and errors in performance are lower than in patterns having a lower degree of centrality, such as the Circle. However, he also found that the morale of members in high centrality patterns is relatively low. Bavelas

speculated that this lower morale could, in the long run, lower the accuracy and speed of such networks.

In problem solving requiring the pooling of data and judgments, or "insight," Bavelas suggested that the ability to evaluate partial results, to look at alternatives, and to restructure problems fell off rapidly when one person was able to assume a more central (that is, more controlling) position in the information flow. For example, insight into a problem requiring change would be less in the Wheel and the Star than in the Circle or the Chain because of the "bottlenecking" effect of data control by central members.

It may be concluded from these laboratory results that the structure of communications within an organization will have a significant influence on the accuracy of decisions, the speed with which they can be reached, and the satisfaction of the people involved. Consequently, in networks in which the responsibility for initiating and passing along messages is shared more evenly among the members, the better the group's morale in the long run.

### **Direction of communication**

If it's considered formal communications as they occur in traditional military organizations, messages have a "one-way" directional characteristic. In the military organization, the formal communication proceeds from superior to subordinate, and its content is presumably clear because it originates at a higher level of expertise and experience. Military communications also carry the additional assumption that the superior is responsible for making his communication clear and understandable to his subordinates. This type of organization assumes that there is little need for two-way exchanges between organizational levels except as they are initiated by a higher level. Because messages from superiors are considered to be more important than those from subordinates, the implicit rule is that communication channels, except for prescribed information flows, should not be cluttered by messages from subordinates but should remain open and free for messages moving down the chain of command. "Juniors should be seen and not heard," is still an unwritten, if not explicit, law of military protocol.

Vestiges of one-way flows of communication still exist in many formal organizations outside the military, and for many of the same reasons as described above. Although management recognizes that prescribed information must flow both downward and upward, managers may not always be convinced that two-way ness should be encouraged. For example, to what extent is a subordinate free to communicate to his superior that he understands or does not understand a message? Is it possible for him to question the superior, ask for clarification, suggest modifications to instructions he has received, or transmit unsolicited messages to his superior, which are not prescribed by the rules? To what extent does the one-way rule of direction affect the efficiency of communication in the organization, in addition to the morale and motivation of subordinates?

These are not merely procedural matters but include questions about the organizational climate, or psychological atmosphere in which communication takes

place. Harold Leavitt has suggested a simple experiment that helps answer some of these questions. A group is assigned the task of re-creating on paper a set of rectangular figures, first as they are described by the leader under one-way conditions, and second as they are described by the leader under two-way conditions. (A different configuration of rectangles is used in the second trial.) In the one-way trial, the leader's back is turned to the group. He describes the rectangles as he sees them. No one in the group is allowed to ask questions and no one may indicate by any audible or visible sign his understanding or his frustration as he attempts to follow the leader's directions. In the two-way trial, the leader faces the group. In this case, the group may ask for clarifications on his description of the rectangles and he can not only see but also can feel and respond to the emotional reactions of group members as they try to re-create his instructions on paper.

On the basis of a number of experimental trials similar to the one described above, Leavitt formed these conclusions:

1. One-way communication is faster than two-way communication.
2. Two-way communication is more accurate than one-way communication.
3. Receivers are more sure of themselves and make more correct judgments of how right or wrong they are in the two-way system.
4. The sender feels psychologically under attack in the two-way system, because his receivers pick up his mistakes and oversights and point them out to him.
5. The two-way method is relatively noisier and looks more disorderly. The one-way method, on the other hand, appears neat and efficient to an outside observer.<sup>[3]</sup>

Thus, if speed is necessary, if a businesslike appearance is important, if a manager does not want his mistakes recognized, and if he wants to protect his power, then one-way communication seems preferable. In contrast, if the manager wants to get his message across, or if he is concerned about his receivers' feeling that they are participating and are making a contribution, the two-way system is better.

## **Interpersonal communication**

: Interpersonal communication

Another facet of communication in the organization is the process of face-to-face, **interpersonal communication**, between individuals. Such communication may take several forms. Messages may be verbal (that is, expressed in words), or they may not involve words at all but consist of gestures, facial expressions, and certain postures ("body language"). Nonverbal messages may even stem from silence.

Ideally, the meanings sent are the meanings received. This is most often the case when the messages concern something that can be verified objectively. For example, "This piece of pipe fits the threads on the coupling." In this case, the receiver of the message can check the sender's words by actual trial, if necessary. However, when the sender's words describe a feeling or an opinion about something that cannot be checked objectively, meanings can be very unclear. "This work is too hard" or "Watergate was politically justified" are examples of opinions or feelings that cannot



be verified. Thus they are subject to interpretation and hence to distorted meanings. The receiver's background of experience and learning may differ enough from that of the sender to cause significantly different perceptions and evaluations of the topic under discussion. As we shall see later, such differences form a basic barrier to communication.

Nonverbal content always accompanies the verbal content of messages. This is reasonably clear in the case of face-to-face communication. As Virginia Satir has pointed out, people cannot help but communicate symbolically (for example, through their clothing or possessions) or through some form of body language. In messages that are conveyed by the telephone, a messenger, or a letter, the situation or context in which the message is sent becomes part of its non-verbal content. For example, if the company has been losing money, and in a letter to the production division, the front office orders a reorganization of the shipping and receiving departments, this could be construed to mean that some people were going to lose their jobs — unless it were made explicitly clear that this would not occur.

A number of variables influence the effectiveness of communication. Some are found in the environment in which communication takes place, some in the personalities of the sender and the receiver, and some in the relationship that exists between sender and receiver. These different variables suggest some of the difficulties of communicating with understanding between two people. The sender wants to formulate an idea and communicate it to the receiver. This desire to communicate may arise from his thoughts or feelings or it may have been triggered by something in the environment. The communication may also be influenced or distorted by the relationship between the sender and the receiver, such as status differences, a staff-line relationship, or a learner-teacher relationship.

Whatever its origin, information travels through a series of filters, both in the sender and in the receiver, before the idea can be transmitted and re-created in the receiver's mind. Physical capacities to see, hear, smell, taste, and touch vary between people, so that the image of reality may be distorted even before the mind goes to work. In addition to physical or sense filters, cognitive filters, or the way in which an individual's mind interprets the world around him, will influence his assumptions and feelings. These filters will determine what the sender of a message says, how he says it, and with what purpose. Filters are present also in the receiver, creating a double complexity that once led Robert Louis Stevenson to say that human communication is "doubly relative". It takes one person to say something and another to decide what he said.

Physical and cognitive, including semantic filters (which decide the meaning of words) combine to form a part of our memory system that helps us respond to reality. In this sense, March and Simon compare a person to a data processing system. Behavior results from an interaction between a person's internal state and environmental stimuli. What we have learned through past experience becomes an inventory, or data bank, consisting of values or goals, sets of expectations and preconceptions about the consequences of acting one way or another, and a variety of possible ways of responding to the situation. This memory system determines what things we will notice and respond to in the environment. At the same time,

stimuli in the environment help to determine what parts of the memory system will be activated. Hence, the memory and the environment form an interactive system that causes our behavior. As this interactive system responds to new experiences, new learnings occur which feed back into memory and gradually change its content. This process is how people adapt to a changing world.

## **Communication Approaches in an Organization**

Informal and Formal Communication are used in an organization. Informal communication: Informal communication, generally associated with interpersonal, horizontal communication, was primarily seen as a potential hindrance to effective organizational performance. This is no longer the case. Informal communication has become more important to ensuring the effective conduct of work in modern organizations.

Top-down approach: This is also known as downward communication. This approach is used by the Top Level Management to communicate to the lower levels. This is used to implement policies, guidelines, etc. In this type of organizational communication, distortion of the actual information occurs. This could be made effective by feedbacks.

### **Category: Organizational theory**

#### **Communication bloopers: funny, but no joke!**

When management recruitment ads call for excellent communications skills, do they mean the ability to use language in a clear and unambiguous way? Judging by the statements of many executive personnel, one might well be excused for believing just the opposite, **as these amusing examples show.**

#### **What makes a communicator great?**

Why do some speakers stand out as charismatic, charming, approachable or likable, while others are easily overlooked or forgotten? A close examination of the speeches and presentations of the most successful communicators reveals that the speakers have three traits in common. **What are they and why are they so important?**

#### **How to say no! the right way**

Saying no to a request can be difficult. Perhaps we don't want to feel as though we are insulting the person or even just letting them down. However, when you believe "no" is the appropriate response, you should be able to do it so that you get your point across kindly and politely. **Here's how to do it.**

#### **Are rude people irritating you?**

When the impudence, thoughtlessness or sheer bad manners of people around you begins to weigh you down, **these five key points** will make sure you don't fall into the same trap.

We all know people who have masses of academic qualifications yet somehow just don't get it right in the world of work. To succeed, you need to manage your own

emotions, and be aware of and sensitive to those of others. A simple exercise will help test your preparedness for both tasks

### **Warning signs of an unhealthy workplace**

If some of these **sickly and counterproductive behaviors** are taking place in your organization, you're probably not very happy at work. And your workplace is in need of renewal and rejuvenation.

### **Enjoyable conversations: learn the basic steps**

Conversation can sometimes seem infinitely complex with all of its nuances. But its basic steps are pretty simple. Those who aren't competent in conversing usually lack skills in at least one of these steps, and usually more than one.

### **How to impress your boss**

"Great job!" or *Well done!*" are words that any employee with an eye on a raise or promotion (or even one with just a strong work ethic) loves to hear. Of course, every supervisor is different and will be impressed by different actions. But here are **three things you can do** that are likely to give any boss a favorable impression of you.

### **How to improve communication during a conflict**

Don't let adrenaline put your brain on auto-pilot when you feel threatened by another's words or actions! Stay calm and **focus on these seven tips** to resolve your conflict quickly by communicating effectively.

### **Easy ways to bring fun back to work**

Especially in these trying times, a little fun can go a long way - even in the workplace! When we lighten up, we reduce stress, break down barriers, open the way to more dialogue, and gain a renewed sense of hope. **Try some of these fun ideas**

### **Reading body language: 5 mistakes people make**

Human beings are genetically programmed to look for facial and behavioral cues. We see someone gesture and automatically make a judgment about the intention of that gesture. Indeed, the ability to 'read' nonverbal signals can provide you with crucial information about other people, which will give you a significant advantage in judging how to interact with them in all kinds of situations. But you have to avoid these five common mistakes that lead people right off the track when they attempt to read body language.

## **HOW TO ENSURE THAT YOUR WRITTEN MESSAGE GETS A REPLY**

Funny thing about voicemail. We love it when it's our own - we hate it when it belongs to someone else.

I don't know about you, but when someone doesn't return my messages, I imagine they are gloating behind my back, laughing demonically as they push the delete button to send me to oblivion.

Actually, I doubt if most people are this cold. But what's so frustrating about voicemail is it gives the decision-maker the opportunity to reject you before you even get a chance to talk to them! If you're starting to feel like a failure because people won't return your messages, here's what to do.

I believe most messages do not get returned because people are overwhelmed. Many of us move through our workday in a state that ranges from mild panic to deep despair.

To get returned, a message must be so compelling that it wins out over the 23 other urgent things vying for the recipient's attention. Yet, many messages do not even come close to addressing the specific needs, desires, wants, and concerns of the person being called.

There's the sales rep who leaves a message saying she would like to stop by and talk with you about advertising in her paper. Yeah right. Like you've got nothing better to do. The copier company calling to sell you toner. Toner? There are six boxes stacked in the closet. Or the person you've never heard of asking you to call him back.

You don't mean to be rude but apparently these people assume you're just sitting around with nothing else to do!

On a busy day, something's got to give and lame, ineffective messages are the first to go.

To help solve this problem, I asked successful friends and sales people to share their best voice-mail techniques. I cannot guarantee that any of these methods will give you a 100% call back ratio, but they will definitely help improve your odds. Test them out and you'll quickly discover the ones that work best for you.

### **1. Be brief**

Try leaving messages with nothing more than your name and number. Do not say why you are calling. Curiosity is a powerful motivator. My sales staff found that this one simple technique increased their call back ratio by 40%! Busy people calling in for messages from the road will also appreciate the fact that your message is brief.

### **2. The "pains" technique**

This is an excellent technique to use as a follow up to a sales presentation. In your initial meeting with the prospect ask probing questions to determine where it "hurts". Make a list of these "pains" and how your product or service can provide specific relief for each concern. Each time you leave a follow up message, mention one of your prospect's "pains" and hint at how you can provide relief. Refer to a different problem each time you call. For example:

- **Message #1:** > *"Ms. Jones, this is Susan Berkley from Berkley Productions at 201-541-8595. I'm calling to offer some solutions as to how our voice recording services can give you a more professional sounding voice mail system and get rid of that annoying recorded voice that was bothering the company president. My number again is 201-541-8595."*

- **Message #2:** > *"Ms. Jones, this is Susan Berkley from Berkley Productions at 201-541-8595. I'm calling with a few solutions to help you reduce those customer complaints about getting lost in your voice mail system that you spoke about in our last meeting. My number again is 201-541-8595."*
- **Message #3:** *"Ms. Jones, this is Susan Berkley from Berkley Productions at 201-541-8595. I'm calling with an easy, cost effective way to help you provide information to your Spanish and Vietnamese speaking customers. You seemed concerned about this in our last meeting and I wanted to discuss some of the ways we help our customers meet this challenge. My number again is 201-541-8595."*

### **3. Tell them you are calling from corporate headquarters**

It adds credibility, especially if you are a small or home based business!

*"Hello, this is Susan Berkley with Berkley Productions corporate headquarters. The reason for the call is..."*

### **4. Leave your first and last name**

Using only your first name creates confusion- "Steve who? I know five guys named Steve!" It also brings to mind service and repair people, delivery drivers, and heavy breathing obscene phone callers.

### **5. Eliminate the word "just" or other minimizers from your speech.**

Examples:

- *"I'm just calling to follow up on yesterday's meeting."*
- *"Nothing important. Just a follow up call to yesterday's meeting."*
- *"Just a little reminder about how our widget can help build your business."*

### **6. Don't sell anything in the message**

Because we are constantly bombarded with advertising, most people have developed a strong sales resistance. The people you are calling will reject you unless you happen to catch them at a moment when they have a passionate desire or need for your product.

### **7. Make the benefits contingent on speaking with you**

*"This is Susan Berkley from XYZ distributors. We have just purchased a number of widgets from a company that went out of business and have priced the stock at a deep discount for fast liquidation. To determine if they are the right size and color for your needs, we need to talk. Call me at 201-541-8595."*

### **8. Speak more slowly and clearly than normal**

Don't slur or run your words together. The person you are calling is not as familiar with the material as you are and will quickly become annoyed if you make them replay the message because they did not understand it.

### **9. Spell your name if it is difficult, unusual or of foreign origin**

Sometimes unusual names are easier to remember than names that are more common. The listener has to work harder to understand it and is more likely to remember you because he made that extra effort. Reinforce this phenomenon by saying your name clearly and spelling it slowly when you leave your first message. An unusual name can make you stand out from the crowd and invites ice-breaking chit chat about the name's origin.

### **10. Sound like a winner by speaking with energy, enthusiasm and confidence**

Sit up straight or stand when you leave the message. Smile as you speak. Visualize yourself as confident and strong. Use hand gestures and powerful body language. If possible, check your energy level by listening back to your message before sending it.

### **11. Leave your phone number twice: once at the beginning of your message and once at the end**

If the person you are calling missed your number at the beginning they will not have to listen through to the entire message again to get it.

### **12. Call again and offer some useful information**

*"I've been thinking about your situation and have a solution that might work. I'd like to share it with you. Please call me at ..."*

Do not leave the solution in the message. Use it as bait to get them to call you back.

**Caution:** do not use this technique unless you actually have something useful to share with the prospect when they call!

### **13. Fax your prospect a giant message slip**

Take a standard "While you were out" phone message slip, fill it out with your message, enlarge it on the copier and fax it to your prospect. *"While You Were Out ... Melissa Smith called Re: A few ideas to help you save big on your taxes."*

### **14. When all else fails, politely threaten to "close their file"**

Making sure there is nothing hostile or impatient in your tone of voice, leave a polite message that goes something like this:

*"Mr. Smith, I've been attempting to reach you for several weeks now regarding the proposal you asked us to send on January 24th, but I have not received a call back. I don't want to bug you or clog your voice mail with unwanted messages, so would you please call me back and let me know if you would like me to close your file?"*

It is almost humorous how quickly this message has gotten people to call us back. People like to leave their options open and nobody likes to be "terminated".

### **15. Make sure YOUR outgoing voicemail message sounds as professional as possible**

When people call your voicemail do you sound welcoming, honest, energetic and sincere or do you sound angry, bored or half asleep? Here are several steps to follow to put your "best voice" forward.

- **Script your message.** Writing it out will help you say exactly what you need to say: nothing more, nothing less. You'll also be less likely to flub when reading from a script. And you'll find it easier to control your pacing and tone when you've got something written to practice.
- **Practice your message before you record it.** Say it over and over again out loud to make yourself familiar with the words.
- **Stand while recording your message.** This will add energy and vitality to your voice.
- **Smile while recording your message.** A smile makes your voice sound warm and friendly.
- **Get feedback from at least 3 friends or colleagues.** Does your message sound as good as it could? If not, re-record!
- **Don't leave flubs on your outgoing message.** I am amazed at how many people leave flubs and stumbles on their outgoing message, especially when re-recording is so easy to do!
- **Customize your message daily.** If possible, let people know if you are in or out of the office and when you will be likely to call them back.
- **Include your USP in your message.** Your USP is your unique selling proposition, a phrase that articulates a key benefit to your customer. Boil it down to a brief phrase and use it in your outgoing message. For example: *"Thank you for calling XYZ language school. We guarantee that you'll start speaking the language of your choice in 30 days or less or your money back. Leave your name and number at the tone and we'll get back to you as soon as we get your message."*

## How to Respond to Angry Customers

### 1. Assume that the customer has a right to be angry

Nobody makes mistakes on purpose, but they do happen. If you are working in a call center, behind a counter or in any capacity that directly interfaces with customers, then you are going to encounter an irate customer at some time.

The most common response is to evaluate the merit of the complaint while you are listening to it. Try to curb that common response and replace it with the assumption that the customer has a right to be angry, even before you know the details.

Perhaps the customer feels betrayed because the product or services did not meet expectations. The customer may be angry because he or she made incorrect assumptions that led to improper expectations. The customer may be angry because of previous experiences, previous contacts with your company or simply because the problem occurred at a very inconvenient time in the customer schedule.

Regardless of the circumstances, acknowledge the customer has the privilege to be irate. Listen carefully to how the anger is expressed so you can find the root cause of the emotion.

## 2. Listen to emotion without emotion

Listen to the inflections and emphasis that the customer places on specific topics to identify the emotional catalyst. Listen to the emotion as well as the words. This will help you to identify the specific item or items that need primary attention.

Resolving a technical issue may be only partially effective if it does not also address the customer emotional concerns. It may not be possible to completely resolve the emotional distress, but it is appropriate to acknowledge it.

Imagine that a customer experienced a technical malfunction when downloading digital images of a special event, wedding or family vacation. The technical issue may be related to hardware or software, but the emotional distress is related to the risk of losing precious memories.

While it is necessary to correct the technical issue, it is also appropriate to acknowledge the risks that create the emotional response. Try to preserve the precious memories or at least explain why they can not be retrieved, but do not ignore the emotional catalyst.

Do not respond with emotion. Remember that the customer anger is not directed at you personally, even if the customer language is directed at you.

If the customer language is attacking and borderline abusive, it is because the customer is looking for acknowledgement and response to the emotional distress as well as the technical or administrative issues. It may be necessary to repeatedly acknowledge the customer emotion to diffuse the situation and reassure the customer that you are attentive to the importance of the emotional distress as well as the technical issue.

## 3. Be patient

Customer conversations come in waves. When the customer is at the peak of expressing anger, sorrow or distress, be patient and listen. It is not effective to interrupt the customer when he or she is venting combustible sentiments. It is like pouring gasoline on a raging fire. Rather, wait for the waves of emotion to recede and then use that opportunity to interject with reassuring comments.

Sometime the customer anger will erupt and return like another set of waves. When that happens, be patient and wait for the customer to run out of gas before you approach the fire again. Reiterate your compassion, acknowledge the customer right to be angry and the catalyst for the emotional distress. Takes quiet deep breaths and wait patiently for your turn to speak.



#### 4. Speak softly

If you encounter a loud and abusive customer, respond by speaking softly and with a very steady tone. If you try to shout over the customer or interrupt, then the customer will concentrate on the verbal battle for attention and will not pay attention to the importance of your message.

If you want your message to be heard, wait for a pause in the customer tirade. Silence is your golden cue that it is time to speak your important message in a soft voice. Eventually the customer will have to lower his or her voice to hear what you are saying.

Even though it may seem that the customer does not care about what you have to say at first, remember that the customer approached you for resolution. The customer may have built up a considerable amount of emotion before reaching you, but ultimately the customer does want your advice and assistance to resolve the problem. Once the customer remembers why he or she contacted you, the customer will be receptive to your soft spoken conversation.

#### 5. Reiterate

Make sure that you are addressing the technical, administrative and emotional aspects of the customer concerns. After you have listened carefully to the customer, reiterate the priorities that you believe that you heard from the customer perspective. This will assure that you are focused on the appropriate issues and reassure the customer that you are concentrating on the proper priorities.

Use a soft, firm and inquisitive voice. Ask the customer to confirm that you have restated the facts and priorities accurately, then write them down.

#### 6. Own the problem

It does not matter who created the problem or what transpired before the customer got to you. Tell the customer that you own the problem and will apply your personal effort to achieve results.

Sometimes it may be tempting to distance yourself from the problem by stating that you are not responsible for it, that another department will need to handle it, or that you are just a messenger. Put that temptation in a can and put a lid on it.

Expressing that you do not have ownership of the problem or the potential resolution gives the customer a feeling of being adrift and powerless. If the customer senses that he or she is communicating with someone who is powerless, it will create yet another reason to be frustrated and angry.

Even if you do need to work with other departments, get manager approval or coordinate some other type of response, inform the customer that you will personally take the matter into your own hands and follow-up on the issues. The customer does not know your company, your policies or your procedures. The customer will never

be able to navigate the requirements, restrictions or resolution with the same knowledge and experience as you.

Reassure the customer that you will use your knowledge and experience to coordinate the best possible resolution, even if you need to get the assistance of other parties to achieve it.

## 7. Place the customer first, problem second

In most cases there are two conflicting issues that occur simultaneously when dealing with irate customers. The first issue is the customer emotional distress. The second is the technical or administrative issue that caused the emotional distress. While it may seem logical to focus first on the technical or administrative issue that cause the emotional distress, it is important to acknowledge the customer anger first and the technical issue second.

Resolving the technical issue may or may not fully resolve the root cause of the customer distress. Acknowledge the customer concerns first and try to calm down the customer enough to help you concentrate on the technical or administrative problems.

Sometimes the technical problem may require much more attention because it may impact other customers. Acknowledge the individual customer emotion first, resolve the specific customer technical issue second and reserve addressing any bigger issues as independent activity.

## 8. Triage

Once you have an opportunity to focus on technical and administrative issues, triage the root cause of the problems to determine what went wrong. Analyze the problem and provide corrective measures or detailed information in an effort to avoid duplicating the problem with other customers. It may be necessary to obtain some additional information from your customer to accurately analyze the root cause of the problem.

## 9. Correct the issue

Correct the issue for the specific customer and also look for long term corrective measures. It may not be feasible to give your customer a guarantee that the correction will resolve all problems permanently, but it may be appropriate to reassure the customer that you will be available to assist in the event that another different problem should occur again. Demonstrate your confidence that this specific problem is resolved and is not expected to reoccur. Demonstrate your attention to the specific customer by reiterating original concerns and actions that you took to correct the issue.

## 10. Follow up

When possible, follow-up with the customer after sufficient time has elapsed to demonstrate that the corrective action has been effective. A phone call or a personalized postcard demonstrates individual attention and acknowledgement.

Demonstrating compassion and attentiveness thirty days after a problem has been resolved is a powerful message to show that you really do care about the individual customer. This follow-up after the anger has subsided and the corrective action has been demonstrated as effective may be enough to retain loyal customers and earn a few new ones.

### How soon is "as soon as possible"?

Somewhere on what seems like page 666 you will find the following:

*"We recommend that you check the popular topics below prior to contacting Technical Support. If you could not find your desired answer, please contact our Technical Support team and we will do our best to help you as soon as possible."*

Finally! But no, not yet. Now we had to find sales receipts and enter a bunch of information to prove we'd purchased the product.

Now before I give the zinger, allow me to call your attention again to their wording, *"We will do our best to help you as soon as possible."*

Are you ready? "As soon as possible" for our urgent situation was seven days.

Seven Days.

I don't know about you, but I don't have time to read page after page of tech-speak trying to find an answer to my question. Besides, if I had wanted to become an expert in AVG, I would have gone to school for it.

But apparently I made a mistake. It seems I'm not only supposed to be an expert in my own profession, I now have to read up and become an expert in anti-virus software, too.

### How long would I stay in business?

In considering this lunacy, I wondered what it would look like if I did customer service the same way as these companies do.

Let's say a software company buys my online learning modules for "the Manager as Trainer." Someone has a question about how to apply the material. They go to my website but find no phone number, only page after page of text describing hundreds of scenarios in which the training might apply. At the top of each page it says,

*"We recommend that you check the FAQ section prior to contacting Training Support, as you will often find that your question has already been addressed."*

After spending hours sifting through my well-thought out scenarios, they finally give up and send an e-mail. About a week later, I send them a generic message saying I've received their inquiry, and I'll get back to them soon.

How long do you think I'd stay in business?

Exactly.

So why do we keep tolerating this low level of service from others? Well, like I said, no longer will I do so. From this point forward, if I cannot reach a vendor or supplier by phone, or if I do not get a solutions-focused, actually helpful response within one business day, I will find another company for that product or service and I will do business with them instead.

It is high time we stop tolerating such poor customer service and start The Great Boycott of e-mail-only customer service.

## **Ways to Prevent Customer From Hell Experiences**

While customers present the issues and challenges, it is most often the way we respond to these issues and challenges that causes customers to become "difficult." This is good news and bad news.

**As much as we'd like to point a finger at our customers, the fingers often end up pointing back at us**

The bad news is that, as much as we would like to point our fingers at our customers, the fingers often end up pointing back at us. The good news is that it means a lot, if not most, customer conflict is avoidable.

Here are three things you can do to prevent situations from escalating into conflict:

### **1. Set expectations**

Gerard King and Gus Geursen, in their research (*A System Dynamics Investigation Of The Linkage Between Customer Satisfaction And Firm Profitability*), illustrated how important it is to manage the expectations of your customers. They found that managing and meeting customers' expectations is more important to customer satisfaction than the actual quantity and quality we deliver.

This means, for example, that you shouldn't say to a customer, *"I'll get this done right away,"* because your customer and you may have different expectations of what 'right away' means.

Instead, set your customer's expectations by being specific; ie: *"I'll have this done for you by the end of the day."* Then make sure you deliver!

## 2. Listen

A couple of issues ago, *Winning at Work* focused on "The Art of Listening." Nowhere is this more important than when trying to prevent conflict.

A huge hot button for customers is when they perceive they aren't being listened to.

## 3. Communicate how important they are

One of the most common triggers for conflict is when a customer begins to believe that you just don't care about them.

It's important that you verbalize how important they are with statements such as, *"I want to get this right for you," "You're an important customer for us," "Let's figure out how to make this work,"* etc.

There are, of course, many other conflict prevention strategies available to us, but these are three of the most powerful. Good luck with them!

### **How to lose a customer in two Steps or less**

**It's a universal given that when we shop somewhere we'd like to be treated with respect. When our shopping experience is negative, statistics show it takes only two such incidents and we're likely to shop elsewhere.**

**The real question is how many customers have you lost due to customer service blunders?**

In a survey of more than 2,000 consumers in the U.S and the U.K., nearly half (49 percent) said poor service led them to change service providers in at least one industry over the past year. This according to 2005 survey results appearing in CRM Today.

If the experiences listed below seem familiar, you can see why people make changes.

### **Poor customer service: case**

The dry cleaner near my house advertises that if you bring your clothes in by 9:00 AM they can have them ready for you by 5:00 PM that same day. But when I arrive at 8:30 in the morning and ask for my clothes to be ready that evening, I'm often the recipient of a prolonged sigh, followed by an obligatory "okay."

Heck, if same day service is such a burden, don't advertise it.

### Poor customer service: case

A well-known bulk-discount chain store offers special buys on clothing and electronics and stocks large-size containers of food for bargain prices. You have to pay to become a member. A friend of mine says the person signing up new members is friendly enough, but after you're a member, 95% of the employees appear burdened to have to serve you.

### Poor customer service: case

A colleague tells about visiting a computer / peripheral equipment store, and that when he's made purchases there (always spending more than \$200 per visit), the help behind the counter acts like it's a huge chore to take his money and put his purchases in a bag—if they even bother to offer to bag his purchase at all.

During one visit he even commented: "Hey, I just spent \$260 here, could you at least show a little appreciation?"

**The result of these experiences?** I now drive two miles out of my way to a different dry cleaner, my friend never renewed her membership at that club store, and my colleague has found a different place to shop for computer and printer needs.

Each place of business was given at least two chances, but repeated failures in the customer service arena resulted in losing us as customers.

### The fed-up consumer

In another survey, this one conducted in the U.S. by am docs, a provider of customer relationship software, 1,000 U.S. consumers were asked about shopping experiences across a wide variety of industries. Results indicate that consumers "will not take it anymore" when it comes to receiving poor service:

- More than 75 percent said they would hang up after waiting on hold for longer than five minutes.
- More than 80 percent would rather visit the dentist, pay their taxes, or sit in a traffic jam than deal with an unhelpful representative.
- 75 percent said that they tell friends and family about their negative experiences.
- 85 percent reported that negative customer service experiences drive them to switch providers.

With stats like this, it's crucial that anyone having contact with customers (and this goes for internal customers, too) be trained to bathe their patrons with good service and an attitude of appreciation.

Furthermore, treating customers adequately may no longer be enough. Recent research appearing in the *California Management Review* indicates that satisfied customers will return to do business with you 28 percent of the time—but that delighted customers will return 85 percent of the time.

With those numbers, it only makes sense to provide outstanding customer service!

### Step 1 for losing a customer

The first step toward losing customers is placing people in customer service positions without providing much in the way of training. These people represent your company! If they don't do it well, whatever money you think you're saving by not training them is being lost many times over with dissatisfied customers slipping away—and taking their money with them.

To prevent losing customers, train service reps on listening to customers and identifying needs as well as acceptable solutions. Think how frustrating it is to deal with a customer service rep who knows very little about the products or service he or she is representing, let alone display an attitude that they don't care about your problem.

### Step 2 for losing a customer

Another way to lose customers is provide no feedback to employees on how they're perceived by customers.

One way to raise awareness of good (or bad) customer service in your company is by using a "mystery shopper." The trick here is not to rely on face-to-face shopping. These days, good mystery shopper programs can also evaluate customer service provided on phone calls and through email.

**Bottom line:** Poor service can quickly lead to lost business. Raising awareness of good customer service among all employees helps keep the customers coming back.

#### What to do when you can't say yes

As much as you want to please your customers, there will be occasions when it's just not possible - or practical - to accede to their requests. But just as saying "yes" won't always, of itself, keep your clients happy, a refusal doesn't have to mean that they're lost to your business either. It all depends on your creativity and flexibility.

One of the most negative situations one can create with a customer is to say "no." In general, people hate to be told "no." It starts when we are little kids and our parents constantly scream "NO!" at us.

But sometimes saying "no" is unavoidable. In Karen Leland & Keith Bailey's excellent book, *Customer Service for Dummies*, they cover a number of reasons you would have to say "no."

Let's cover some major reasons why we would have to say "no," and what we can or cannot do about them.

## It is the law

Sometimes you are asked to do something and agreeing to do it would break a law. This one is simple. Most customers should be comfortable with the reason.

## It is company policy

I hate being told someone can't do something because of "company policy."

One Saturday evening my wife and I ventured to a restaurant known for great food at reasonable prices. I decided to try the pork special, which included potatoes and vegetables. I asked what the vegetables were. The waitress told me string beans and corn. Well, I love corn, but hate string beans, and I asked if I could have extra corn instead of the string beans. The waitress said they do not substitute.

So, I asked her just to leave the string beans off. She told me she couldn't do that either. I asked why. She said it was their policy. I told her that at McDonalds if I don't want a pickle, they leave off the pickle.

She looked at me like I was nuts! The dinner came with the string beans and we never went back.

## We're out of it!

A company can be out of a part. The book store can be out of a best selling book. A movie theater can be sold out of seats. It is all the same. You have to tell the customer you don't have any more.

So, what do we do? Let's take a lesson from Nordstrom's.

Legend has it that a customer wanted something that Nordstrom's was out of. The employee asked the customer to come back in fifteen minutes. Meanwhile the employee ran to another store in the mall, paid retail for the item and brought it back to Nordstrom's where it was sold to the customer as if Nordstrom's had the item all along.

Great solution when you can do it, but sometimes it is not that easy. One of my retail clients will actually send the customer to the competition, but not before they call the store and have it held in their customers name.

Most of the time the customers are appreciative, seeing that the store is more interested in taking care of the customer than making sale. In the long term, the store gains the customer's s loyalty and trust.

Sometimes you just have to resort to telling the customer when the item will be back in stock. Just make sure you honor your promise. If you say it will be in next Tuesday, it had better be in.



## It just can't be done!

Sometimes a customer wants something that just can't be done or is impossible to get. It is that simple.

Your goal should be to educate the customer why you can't get them what they want. However, if you are really good, you could try to help find it somewhere else, or maybe find a replacement.

## Yes isn't good enough...

Sometimes giving the customer what he/she wants doesn't ensure the customer will be happy with you.

I remember pulling into a parking lot which had some open spaces I could see from the street only to be told they were full. I argued that I saw open spots. The attendant argued that there weren't any. He refused to look, even though I told them exactly where they were.

After five minutes of arguing, he finally agreed to look. Sure enough he saw the spaces I had seen from the street.

He angrily waved me in. Even though I got my parking space, I was mad. He "gave in", but he did it too late.

## Saying "no isn't so bad...

No, it *might* not be so bad. One day I went into one of my favorite places, Baskin Robbins, the well known ice cream parlor. I was excited to order my favorite flavor, Quarterback Crunch. To my disappointment, they were out of that flavor.

The girl dishing out the ice cream told me what her favorite flavor was and asked if I wanted to try it. I did and guess what? I now have a new favorite flavor!

Substitution is a viable alternative to many situations. Sometimes it may be obvious, while other times you may have to take a creative approach. With the right attitude, you may find that saying "no" is an opportunity to show how good you are.

So the next time you are forced to say "no" to a customer or client, think of the above. Delivering great service and creating Moments of Magic have always included common sense thinking and flexibility.

## The Dangerous Customer

**What is a dangerous customer? It is not necessarily a customer that is threatening you with a knife or a gun. (That is not just a dangerous customer, but a dangerous person.) What we are discussing in this article is the customer that puts you into the "danger zone" of lost business.**

We aren't talking about customers who have a complaint about you and choose to tell everyone they know. We are talking about that potentially very dangerous type of customer, a *satisfied* customer.

### **First words make (or break) first impressions**

**If your job is to receive customers, you only have second or two to work with before an irrevocable impression is registered on the client's mind. The right choice of words will ensure that it's a great one.**

Isn't it frustrating when those are the first words that come out of a front line employee's mouth? As if they didn't want to take the time, or couldn't care less about offering a friendly, approachable greeting to the customer.

Meanwhile, the next guy waiting in line thinks to himself, *"Gee, thanks for the warm welcome. Nice first impression."*

### **Customer service skills that make a big difference**

#### **How to build the rapport that leads to success in any business relationship**

People part with their money for two reasons. One, you can solve a problem for them. Two, because you make them feel good in the process.

Look at it this way. It's hard to quickly evaluate the expertise of a new dentist. But you immediately know which one makes you feel more comfortable.

You can take lessons from a highly qualified ski instructor. But if his silence makes you feel awkward while riding the chair lift together, you'll switch instructors.

When Super K-Mart and Target carry the same items at about the same prices and they're located close together, where do you buy? You choose the store where the returns are simpler, the people are friendlier, and the appearance is cleaner where you are made to feel more welcome.

The "feel good" factor underlies every aspect of life. Even in the area of parent-teacher conferences, if your child's teacher delivers negative feedback in a way that shows empathy, not harshness, you're more likely to support the next vote to increase taxes for schools.

In June 2003 story, *USA Today* reported that basketball legend Kareem Abdul Jabbar struggles to be considered for NBA and college coaching positions.

Apparently, he's perceived as aloof. A problem because coaching is a combination of building rapport with players, the community, alumni, athletic directors, sponsors and business executives. My best guess is that Mr. Abdul Jabbar is shy or ill at ease with people he does not know well.

Similarly, in the corporate world, if you want a promotion but come across as aloof or reserved, you'll be overlooked in favor of someone who has warm "people skills" - someone who makes others feel good about being around them.

Here's how to build rapport that leads to success in every business relationship.

### **Use small talk as a picture frame around business conversations**

Begin and end with small talk before and after making a presentation to a client, selling a widget, negotiating a contract, providing a service or conferencing with your child's teacher. A study conducted with physicians showed those who spend a few minutes asking patients about their family, their work or what summer plans they have before and/or after an examination are less likely to be sued than those who don't.

Let's face it. People don't sue people they care about. And we care about people who show they care about us.

### **Express empathy**

Everyone is entitled to be listened to, even when in the wrong.

Consider the client who sees the stock market rise 30% but not his own portfolio. The stockbroker knows the client insisted on picking the stocks himself, but it would be a mistake to make the client "wrong".

It's better to say, "I realize it's frustrating to experience this. What can we do from here?" That goes a long way to diffusing negative emotions and helping the client feel better about this relationship -- rather than be tempted to move on to another stockbroker.

### **Greet people warmly, give eye contact and smile**

Be the first to say hello. Be careful, you might be viewed as a snob if you are not the first to say hello.

People often go back to their favorite restaurants because the host greets them with a sincere smile, looks at them directly, and welcomes them with warmth. My husband and I go to our favorite restaurant Carmine's on Penn--and bring our friends there, too--because the wait staff, the host/hostess and the door and even the owner take the time to make us feel extra special.

## Use the person's name in conversation

You are more likely to get special treatment by using the person's name you are talking with. When you call to clarify a credit card billing, for example, say, "Joe, thanks for taking the time to help me with this question." That makes Joe feel his role is important.

If you don't know someone's name, take a moment to ask, and then repeat it. Be sure to pronounce it correctly. And never presume your conversation partner has a nickname. My name is Debra, not Debbie. I don't feel good when people call me Debbie. It's a little thing that has big importance.

## Show an interest in others

In response to our high tech environment filled with e-mail and fax broadcasts, we need high touch more than ever. That's what you create when you show an interest in the lives of your customers/clients/patients every chance you get.

## Dig deeper

When you engage in a conversation, don't leave it too quickly.

If your customer/client/patient mentions her vacation, pick up on the cue and dig deeper. Ask where she went, what she did, what was the highlight, if she would go back.

You'll make her feel good about her life and about taking time with you. Always follow up a question like "How's work?" with "What's been going on at work since the last time we spoke?" This way they know you really want to hear about what is going on with work.

## Be a good listener

That means making eye contact and responding with verbal cues to show you hear what the speaker says. Verbal cues include these phrases: tell me more; what happened first, what happened next, that must have been difficult, and so on. Using them makes people feel actively listened to.

## Stop being an advisor

When you mention a problem you might be having with an employee or an associate, do people offer advice without asking any questions? Have you ever put together a resume and, as soon as you sent it out, someone told you it was too long or too short or too detailed or not detailed enough?

Jumping in with unsolicited advice happens annoyingly often. Instead of advice, give understanding with simple phrases like: "I know you can work out a solution" or "I hope the job hunt goes well for you." Offer advice only when you are specifically asked for it.

An example I experienced in my business really makes my point about the "feel good" factor. I wanted to find a good print shop near my home and walked into one near the busiest post office in our state. I was greeted with a sign that read: *"Lack of preparation on your part does not constitute an emergency on my part."* I thought how many people would zip into this shop for a few photocopies before mailing off an important package? I doubt they would feel welcome here.

I then visited a printing shop across the street. Two colorful signs posted there made my day. One featured a cactus and said, *"Stuck? We'll help you out in a prickly situation."* The other showing a pot of jam said: *"In a jam? We'll help you out of a sticky situation."*

You can guess which printer made me feel better about forming a business relationship.

Whether you want to land a new job, enhance your practice, gain listings, increase your billable hours, bring new people into your business, or make sure people remember you with referrals - pay attention to the "feel good" factor. And enjoy the success that follows.

**The quality of everyday language used in business is on the decline. We are often unaware of the impact that our words have on our customers.**

When we use language that is negative or abrupt, we create communication barriers that will frustrate and offend people.

Negative language can quickly destroy even the strongest business relationships.

Below are four types of phrases that most people find irritating and some guidelines for changing them from negative to positive phrases:

### **Giving orders to your customers**

***Rather than:***

"You have to..."

"You must..."

***Use:***

"If you will \_\_\_\_\_, then I can..."

"In order to \_\_\_\_\_, we need..."

### **Focusing on what you *can't* do instead of what you *can* do**

***Rather than:***

"I can't do that..."

"We don't do that..."

"You can't..."

**Use:**

"Here is what I can do for you."

"Let's see what we can do."

"Here is what you can do..."

## Criticizing or blaming your customer

**Rather than:**

"You should have..."

"You never..."

"You failed to..."

**Use:**

"Here's how we can resolve this..."

"Often..."

"We did not receive..."

## Appearing not knowledgeable or unwilling to help

**Rather than:**

"I don't know."

**Use:**

"I'll be happy to check on that for you."

"Let me find out for you."

The ability to recognize and change your negative language into positive phrases will provide you with excellent tools to build lasting customer relationships.

It takes integrity and practice to master positive communication skills. But when you do, you will see immediate results in the delighted responses of your co-workers and customers.

### So you also hate public speaking?

OK, we'll come straight...this one's not meant to be taken too seriously, but apart from giving you a jolly good laugh, it might put you in a more receptive mood for the more serious stuff below - especially if, somehow you recognize yourself here! ...*My stomach's not quite right...when I stand up to speak I'm paralyzed with fright..*" laments Barbara McAfee in this ditty she both wrote and sings especially for the consulting firm, Spoken Impact. So you see, you're not alone. No way!

### ...But your speaking skills are better than you think!

If you do see yourself in the top video, this one could be the perfect antidote, because trainer Robert Graham insists you are always better than you think! Robert offers here some fundamentals of successful public speaking. Among the topics he touches on are the importance of viewing your speech as a series of "small conversations", the correct use of the hands and gestures and how to avoid "verbal crutches" and negative body language.

### Use Powerpoint, but please, *not* like this!

"Hey, what gives here?", you'll ask when you turn up the sound on this little presentation, "Isn't this also a comedy routine?" Indeed it is! But while you might find Don Macmillan (probably the only professional comedian with a background in hi-tech) hilarious, the lessons he teaches here are dead serious. In his inimitable style, Don points out and explains the all too common mistakes people make when preparing and delivering presentations with the aid of Powerpoint. If you can't stop chuckling on the way, well, why not?

### How to Be Persuasive

**Successfully persuading others to adopt your point of view is a matter of neither magic nor luck. It's a skill and like any skill, improvement takes know-how, opportunity, and practice. These pointers will help you strengthen your persuasion skills.**

**When I ask audience members who of them would like to be more persuasive, hands shoot up. Yet, many people approach persuasion in a way that undermines their chance of success; in the process, they succeed only at being unpersuasive.**

I recall, for example, the project manager whose hotheadedness led customers to discount even her most astute ideas. And the developer who pooh-poohed everyone else's needs, yet wanted them to rally around his own. And the IT director who was such a relentless talkaholic that people took circuitous routes around the floor to avoid him.

**Make no mistake:** The starting point in being persuasive is to build trust and credibility so that when you seek to persuade, people will give you a fair hearing. You

can then draw from the following suggestions to successfully prepare and present your case.

### **Choose your cases wisely**

If you repeatedly try to gain buy-in for things that are exceedingly unlikely, blatantly unrealistic, or technically impossible, you risk creating a cry-wolf reaction in those you're trying to persuade. Once that happens, they won't take you seriously when you have a legitimate matter to put forward.

Still, sometimes it's worth a shot. One project manager, Cliff, summoned the courage to ask his boss for a three-month leave to pursue some personal goals. Cliff was so sure the answer would be "Are you out of your mind?" that he almost didn't hear his boss say, "OK, let's find a way to make this happen."

### **Be specific about your desired outcome**

If, for example, you'd like more (of whatever), be precise. Two additional testers or twelve? Five new laptops or fifteen? An extra week or two months? And explain why. Most people want to know the "why" behind the "what."

To support your proposal, gather as much relevant data as you can. This will show you've given the matter serious thought and are not just acting on a whim. The fact that you've done your homework gives you a distinct advantage over those who demand, plead, or whine in hopes of being persuasive.

### **Do for others before asking them to do it for you!**

According to the reciprocity principle, people feel obligated to give back when a favor—even an unrequested favor—has been done for them.

This principle has chilling implications when applied for nefarious purposes. But what could be better than providing genuine value to others as a consistent practice? Then, when you seek their support for something that's important to you, they may be more inclined to give it.

### **Focus on issues pertinent to those you want to persuade**

How will they benefit from your desired outcome? What issues could make it difficult for them to honor your request? What objections might they have and how can you counter these objections?

Consider, also, what these people emphasize when they seek to persuade. If, for example, they stress facts and figures, strive to do the same. If they focus on how people—or productivity, deadlines, etc.—will be affected, orient your key points accordingly. The more your own case meshes with what matters to these people, the better your chances of winning them over.



## Persuade professionally

Compelling though your case may be, sputtering and stammering will weaken its impact. Too many "ums" and "uhs" won't help either, nor will staring at the ceiling in hopes of sudden inspiration once you're on the spot. </P

If you'll be making your case in spoken form, practice it as if you're giving a presentation be in written form, make it articulate. A typo-laden email message may be fine for trivial communications, but if you want to be persuasive about important matters, a polished, professional-looking write-up will carry more weight.

## Pay attention to timing

Teammates who slave over buggy code all weekend may be too bleary-eyed on Monday to care what you want. Your manager may not be sympathetic to your ideas after going a few rounds with a demanding, scope-expanding customer. Some people can't focus before their first (or fifth) cup of coffee. So don't just pop into the other party's office or cubicle when the mood strikes you and assume you'll get undivided (or even fractional) attention.

I recall a fellow named Hank who was so eager to present his Great Idea to his boss, Chuck, that he confronted Chuck at 8 a.m. on Chuck's first day back from vacation. Not only did Chuck have emails overflowing his inboxes, but his own manager had graciously welcomed him back with a crisis. Did Chuck pay attention to Hank's idea? Not a chance.

## Don't expect an instantaneous 'yes'

It might not be a stretch to persuade a coworker to change today's lunch date to tomorrow. But making a pitch for something big, such as the adoption of agile methods, is unlikely to get an immediate "Sure, why not?" (Wouldn't that be wonderful?) </P

Getting buy-in for something that entails a major change usually takes patience and quiet persistence. Let the idea seep in. Show how other organizations or teams have benefited. Find credible allies who can add clout to your case. Suggest ways to start small and with minimal risk. Give it time. Building your case slowly and steadily will improve your odds of success.

## if the answer is 'no', learn from the rejection

If you get turned down, accept the decision gracefully. Arguing and "yes, but"-ing will simply peg you as a nuisance, making it even harder to succeed next time around.

Instead, request an explanation and then do your own personal retrospective. Ask yourself: Do I still think my proposal was realistic and reasonable? Did I package my idea appropriately? What should I do differently next time around?

## Savor the unexpected "Go for it!"

Back when I was an IT manager, there was some expensive hardware my staff and I yearned for that the director would need to fund. To get his go-ahead, we prepared a compellingly persuasive presentation and demo. At the appointed time, the director showed up, took one look at the product, and said, "Buy it!" We did. No complaints!

## Are Women Being Heard?

### What Men and Women Can Learn From Each Other About Giving Presentations

Only 8 Fortune 500 companies are run by women, and a total of 16 Fortune 1000 companies have women in the top job.

Michael Kinsman of the San Diego Union-Tribune reports that women hold just 15.7 percent of top management jobs in Fortune 500 companies.

There are many reasons, theories and opinions as to why women still lag behind men in the top jobs.

But what happens in conference rooms and at company-wide meetings? When women speak, are they being heard?

Some women don't think so.

Several women I recently spoke with are in the scientific field, a field dominated by men. They felt that their biggest challenge was being heard and that sometimes the same information presented by a man to the same audience would be heard and listened to with more respect and perceived credibility.

Well, it seems that both women and men can learn from each other when it comes to giving presentations.

Dave Zielinski in the May 2004 issue of *Presentations Magazine* explored the subject in depth in his article *From the Playground to the Podium: What Men and Women Can Learn from Each Other*.

I'd like to share with you Dave's conclusions and my thoughts on what men and women can learn from each other in the presenting arena.

### What women can learn from men

#### 1. Quash the qualifiers

**Dave:** Women often soften their statements by qualifiers such as *I sort of thought, or in my opinion or this might be a better way*. Compare these statements: *In my opinion, the project will work better if we bid separately* versus *The project will work better if we bid separately*. The latter is more powerful.

**Dana:** Please remove the word *like* from your vocabulary in inappropriate places. For example: *The real estate market in this area has appreciated like 25 percent in the last year* versus *The real estate market in this area has appreciated 25 percent in the last year*.

## 2. Go by the numbers

**Dave:** When organizing a message, many men like to announce a number before each point: *Point 1 is X, Point 2 is Y, Point 3 is Z*. This isn't always good in personal conversation, but it works well in presentation settings where audiences have less patience for rambling or digression.

**Dana:** This is a great tactic for keeping both the presenter and the audience on track. It also helps in the development of a presentation to prioritize and organize your information.

## 3. Accessorize minimally

**Dave:** Because women have more clothing options than men, the odds are greater they'll make apparel decisions that distract an audience. Presentation coaches suggest simple but classy attire and the minimal accessorizing.

**Dana:** Remember you want to keep your apparel a step up from your audience. If you are being brought in as a subject matter expert, be sure to look the part. Audiences make very quick judgments on your credibility from your appearance alone.

## 4. Grab authority and keep it

**Dave:** Whether it's true or not, many men seem more comfortable with authority than women. Women who want to be perceived as more authoritative should minimize the factors that undermine authority—digression, indecisiveness, equivocation—and learn to be assertive in a way that radiates confidence.

**Dana:** Speak clearly, directly and project confidence with your voice. If you believe and know that what you have to say is important, your audience will too.

## What Men Can Learn From Women

### 1. Temper the talking head

**Dave:** Replace the monologue with dialogue. Energize the audience by asking questions, getting feedback, have a conversation with the audience; don't lecture.

**Dana:** Change the dynamic every few minutes – go from telling a story, to having interaction, to showing visuals – keep it moving.

### 2. Use inclusive language

**Dave:** Women tend to use words such as *we*, *our* and *us*, while men tend to say *I*, *me* and *mine* more often. Check your ego at the door and get better results!

**Dana:** Also remember to be inclusive by making eye contact around the room, one person at a time.

### **3. Cater to the audience**

**Dave:** Men more often present from their own perspective of what they think the audience should know, rather than thoroughly researching what the audience wants to learn or hear. Men are also slower to shift gears if they sense they are losing an audience.

Women, it seems, are better at accurately gauging the emotional temperature and interest level of a room.

### **4. Emote every now and then**

**Dave:** No matter how the genders evolve, females will probably always be more comfortable expressing their emotions than males. But times have changed for men. Crybabies aren't exactly in vogue, but displaying honest emotions is now associated more with inner strength than with weakness.

Some of the important qualities for a leader are If you can tap into the emotions of your audience you will always have a better connection – speak to their hearts and minds.

### **5. Don't drone**

**Dave:** Whether it's to avoid showing emotion or seeming too enthusiastic about something, men are the champions of vocal monotony in the presentation world. The answer isn't to talk more like a woman, but the least you can do is be a less boring man.

**Dana:** We all want to hear speakers who are passionate and enthusiastic about what they present. I'm not suggesting that men become cheerleaders, but a little enthusiasm, a smile and some energy in the voice will do wonders.

See if this helps: Imagine a recent sports game you attended and think about what you would tell your best friend about the game. I bet you'd have some enthusiasm and energy in your voice.

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# Course Name: Development economics

## TOPIC 1 INTRODUCTION

**Development economics** is a branch of economics which deals with economic aspects of the development process in low-income countries. Its focus is not only on methods of promoting economic growth and structural change but also on improving the potential for the mass of the population, for example, through health and education and workplace conditions, whether through public or private channels. Thus, development economics involves the creation of theories and methods that aid in the determination of types of policies and practices and can be implemented at either the domestic or international level. This may involve restructuring market incentives or using mathematical methods like inter-temporal optimization for project analysis, or it may involve a mixture of quantitative and qualitative methods. Unlike in many other fields of economics, approaches in development economics may incorporate social and political factors to devise particular plans. Different approaches may consider the factors that contribute to economic convergence or non-convergence across households, regions, and countries.

### Theories of development economics

#### Mercantilism

The earliest modern Western theory of development economics was mercantilism, which developed in the 17th century, paralleling the rise of the nation state. Under the earlier system of medieval feudalism, Scholasticism was the dominant school of thought, and emphasized reconciliation with Christian theology and ethics, rather than development. The succeeding 16th and 17th century School of Salamanca, credited as the earliest modern school of economics, likewise did not address development specifically.

Major European nations in the 17th and 18th century all adopted mercantilist ideals to varying degrees, the influence only ebbing with the 18th century development of physiocrats in France and classical economics in Britain. Mercantilist development theory also advocated colonialism.

Theorists most associated with mercantilism include Philipp Wilhelm von Hornick, who in his *Austria Over All, If She Only Will* of 1684 gave the only comprehensive statement of mercantilist theory, emphasizing production and an export-led economy.<sup>[6]</sup> In France, mercantilist policy is most associated with 17th century finance minister Jean-Baptiste Colbert, whose policies proved influential in later American development.

Mercantilist ideas continue in the theories of economic nationalism and neomercantilism.

#### Economic nationalism

: Economic nationalism

Following mercantilism was the related theory of economic nationalism, promulgated in the 19th century related to the development and industrialization of the United States and Germany, notably in the policies of the American System in America and the Zollverein (customs union) in Germany. A significant difference from mercantilism was the deemphasis on colonies, in favor of a focus on domestic production.

The names most associated with 19th century economic nationalism are the American Alexander Hamilton, the German-American Friedrich List, and the American Henry Clay. Hamilton's 1791 *Report on Manufactures*, his magnum opus, is the founding text of the American System, and drew from the mercantilist economies of Britain under Elizabeth I and France under Colbert. List's 1841 *Das Nationale System der Politischen Ökonomie* (translated into English as *The National System of Political Economy*), which emphasized stages of growth, proved influential in the US and Germany, and nationalist policies were pursued by politician Henry Clay, and later by Abraham Lincoln, under the influence of economist Henry Charles Carey.

Forms of economic nationalism and neomercantilism have also been key in Japan's development in the 19th and 20th centuries, and the more recent development of the Four Asian Tigers (Hong Kong, South Korea, Taiwan, and Singapore), and, most significantly, China.

### **Post-WWII theories**

The origins of modern development economics are often traced to the need for, and likely problems with the industrialization of eastern Europe in the aftermath of World War II.<sup>[7]</sup> The key authors are Paul Rosenstein-Rodan<sup>[8]</sup>, Kurt Mandelbaum<sup>[9]</sup>, Ragnar Nurkse<sup>[10]</sup>, and Sir Hans Wolfgang Singer. Only after the war did economists turn their concerns towards Asia, Africa and Latin America. At the heart of these studies, by authors such as Simon Kuznets and W. Arthur Lewis<sup>[11]</sup> was an analysis of not only economic growth but also structural transformation.<sup>[12]</sup>

### **Linear-stages-of-growth model**

An early theory of development economics, the linear-stages-of-growth model was first formulated in the 1950s by W. W. Rostow in *The Stages of Growth: A Non-Communist Manifesto*, following work of Marx and List. This theory modifies Marx's stages theory of development and focuses on the accelerated accumulation of capital, through the utilization of both domestic and international savings as a means of spurring investment, as the primary means of promoting economic growth and, thus, development. The linear-stages-of-growth model posits that there are a series of five consecutive stages of development which all countries must go through during the process of development. These stages are "the traditional society, the pre-conditions for take-off, the take-off, the drive to maturity, and the age of high mass-consumption" Simple versions of the Harrod–Domar model provide a mathematical

illustration of the argument that improved capital investment leads to greater economic growth.

Such theories have been criticized for not recognizing that, while necessary, capital accumulation is not a sufficient condition for development. That is to say that this early and simplistic theory failed to account for political, social and institutional obstacles to development. Furthermore, this theory was developed in the early years of the Cold War and was largely derived from the successes of the Marshall Plan. This has led to the major criticism that the theory assumes that the conditions found in developing countries are the same as those found in post-WWII Europe.

### **Structural-change theory**

Structural-change theory deals with policies focused on changing the economic structures of developing countries from being composed primarily of subsistence agricultural practices to being a "more modern, more urbanized, and more industrially diverse manufacturing and service economy." There are two major forms of structural-change theory; W. Lewis' *two-sector surplus model*, which views agrarian societies as consisting of large amounts of surplus labor which can be utilized to spur the development of an urbanized industrial sector, and Hollis Chenery's *patterns of development* approach, which is the empirical analysis of the "sequential process through which the economic, industrial and institutional structure of an underdeveloped economy is transformed over time to permit new industries to replace traditional agriculture as the engine of economic growth." Structural-change approaches to development economics have faced criticism for their emphasis on urban development at the expense of rural development which can lead to a substantial rise in inequality between internal regions of a country. The two-sector surplus model, which was developed in the 1950s, has been further criticized for its underlying assumption that predominantly agrarian societies suffer from a surplus of labor. Actual empirical studies have shown that such labor surpluses are only seasonal and drawing such labor to urban areas can result in a collapse of the agricultural sector. The patterns of development approach has been criticized for lacking a theoretical framework.]

### **International dependence theory**

International dependence theories gained prominence in the 1970s as a reaction to the failure of earlier theories to lead to widespread successes in international development. Unlike earlier theories, international dependence theories have their origins in developing countries and view obstacles to development as being primarily external in nature, rather than internal. These theories view developing countries as being economically and politically dependent on more powerful, developed countries which have an interest in maintaining their dominant position. There are three different, major formulations of international dependence theory; neocolonial dependence theory, the false-paradigm model and the dualistic-dependence model. The first formulation of international dependence theory, neocolonial dependence theory has its origins in Marxism and views the failure of many developing nations to undergo successful development as being the result of the historical development of the international capitalist system.



## Neoclassical theory

First gaining prominence with the rise of several conservative governments in the West during the 1980s, neoclassical theories represent a radical shift away from International Dependence Theories. Neoclassical theories argue that governments should not intervene in the economy; in other words, these theories are claiming that an unobstructed free market is the best means of inducing rapid and successful development. Competitive free markets unrestrained by excessive government regulation are seen as being able to naturally ensure that the allocation of resources occurs with the greatest efficiency possible and the economic growth is raised and stabilized. It is important to note that there are several different approaches within the realm of neoclassical theory, each with subtle, but important, differences in their views regarding the extent to which the market should be left unregulated. These different takes on neoclassical theory are the *free market approach*, *public-choice theory*, and the *market-friendly approach*. Of the three, both the free-market approach and public-choice theory contend that the market should be totally free, meaning that any intervention by the government is necessarily bad. Public-choice theory is arguably the more radical of the two with its view, closely associated with libertarianism, that governments themselves are rarely good and therefore should be as minimal as possible. The market-friendly approach, unlike the other two, is a more recent development and is often associated with the World Bank. This approach still advocates free markets but recognizes that there are many imperfections in the markets of many developing nations and thus argues that some government intervention is an effective means of fixing such imperfections

## Topics of research

Development economics also includes topics such as Third World debt, and the functions of such organisations as the International Monetary Fund and World Bank. In fact, the majority of development economists are employed by, do consulting with, or receive funding from institutions like the IMF and the World Bank. Many such economists are interested in ways of promoting stable and sustainable growth in poor countries and areas, by promoting domestic self reliance and education in some of the lowest income countries in the world. Where economic issues merge with social and political ones, it is referred to as development studies.

## Growth indicator controversy

Per capita Gross Domestic Product (GDP per head) is used by many developmental economists as an approximation of general national well-being. However, these measures are criticized as not measuring economic growth well enough, especially in countries where there is much economic activity that is not part of measured financial transactions (such as housekeeping and self-homebuilding), or where funding is not available for accurate measurements to be made publicly available for other economists to use in their studies (including private and institutional fraud, in some countries). Even though per-capita GDP as measured can make economic well-being appear smaller than it really is in some developing countries, the discrepancy could be still bigger in a developed country where people may perform outside of financial transactions an even higher-value service than housekeeping or

homebuilding as gifts or in their own households, such as counseling, lifestyle coaching, a more valuable home décor service, and time management. Even free choice can be considered to add value to lifestyles without necessarily increasing the financial transaction amounts. More recent theories of Human Development have begun to see beyond purely financial measures of development, for example with measures such as medical care available, education, equality, and political freedom. One measure used is the Genuine Progress Indicator, which relates strongly to theories of distributive justice. Actual knowledge about what creates growth is largely unproven; however recent advances in econometrics and more accurate measurements in many countries is creating new knowledge by compensating for the effects of variables to determine probable causes out of merely correlational statistics.

## **Recent developments**

The most prominent contemporary development economist is perhaps the Nobel laureate Amartya Sen. Recent theories revolve around questions about what variables or inputs correlate or affect economic growth the most: elementary, secondary, or higher education, government policy stability, tariffs and subsidies, fair court systems, available infrastructure, availability of medical care, prenatal care and clean water, ease of entry and exit into trade, and equality of income distribution (for example, as indicated by the Gini coefficient), and how to advise governments about macroeconomic policies, which include all policies that affect the economy. Education enables countries to adapt the latest technology and creates an environment for new innovations. The cause of limited growth and divergence in economic growth lies in the high rate of acceleration of technological change by a small number of developed countries. These countries' acceleration of technology was due to increased incentive structures for mass education which in turn created a framework for the population to create and adapt new innovations and methods. Furthermore, the content of their education was composed of secular schooling that resulted in higher productivity levels and modern economic growth.

## **TOPIC 2;Classical economics**

**Classical economics** is widely regarded as the first modern school of economic thought. It is associated with the idea that free markets can regulate themselves.<sup>[1]</sup>Its major developers include Adam Smith, David Ricardo, Thomas Malthus and John Stuart Mill. Sometimes the definition of classical economics is expanded to include William Petty and Johann Heinrich von Thünen.

Adam Smith's *The Wealth of Nations* in 1776 is usually considered to mark the beginning of classical economics. The school was active into the mid 19th century and was followed by neoclassical economics in Britain beginning around 1870.

They produced their "magnificent dynamics" during a period in which capitalism was emerging from a past feudal society and in which the industrial revolution was leading to vast changes in society. These changes also raised the question of how a

society could be organized around a system in which every individual sought his or her own (monetary) gain.

Classical economists and their immediate predecessor reoriented economics away from an analysis of the ruler's personal interests to broader national interests. Physiocrat Francois Quesnay and Adam Smith, for example, identified the wealth of a nation with the yearly national income, instead of the king's treasury. Smith saw this income as produced by labor, land, and capital equipment. With property rights to land and capital by individuals, the national income is divided up between laborers, landlords, and capitalists in the form of wages, rent, and interest or profits.

## Value Theory

Classical economists developed a theory of value, or price, to investigate economic dynamics. Petty introduced a fundamental distinction between market price and natural price to facilitate the portrayal of regularities in prices. Market prices are jostled by many transient influences that are difficult to theorize about at any abstract level. Natural prices, according to Petty, Smith, and Ricardo, for example, capture systematic and persistent forces operating at a point in time. Market prices always tend toward natural prices in a process that Smith described as somewhat similar to gravitational attraction.

The theory of what determined natural prices varied within the Classical school. Petty tried to develop a par between land and labor and had what might be called a land-and-labor theory of value. Smith confined the labor theory of value to a mythical pre-capitalist past. He stated that natural prices were the sum of natural rates of wages, profits (including interest on capital and wages of superintendence) and rent. Ricardo also had what might be described as a cost of production theory of value. He criticized Smith for describing rent as price-determining, instead of price-determined, and saw the labor theory of value as a good approximation.

Some historians of economic thought, in particular, Sraffian economists<sup>[2][3]</sup>, see the classical theory of prices as determined from three givens:

1. The level of outputs at the level of Smith's "effectual demand",
2. technology, and
3. wages.

From these givens, one can rigorously derive a theory of value. But neither Ricardo nor Marx, the most rigorous investigators of the theory of value during the Classical period, developed this theory fully. Those who reconstruct the theory of value in this manner see the determinants of natural prices as being explained by the Classical economists from within the theory of economics, albeit at a lower level of abstraction. For example, the theory of wages was closely connected to the theory of population. The Classical economists took the theory of the determinants of the level and growth of population as part of Political Economy. Since then, the theory of population has been seen as part of some other discipline than economics. In contrast to the Classical theory, the determinants of the neoclassical theory value:

1. tastes
2. technology, and
3. endowments

are seen as exogenous to neoclassical economics.

Classical economics tended to stress the benefits of trade. Its theory of value was largely displaced by marginalist schools of thought which sees "use value" as deriving from the marginal utility that consumers find in a good, and "exchange value" (i.e. natural price) as determined by the marginal opportunity- or disutility-cost of the inputs that make up the product. Ironically, considering the attachment of many classical economists to the free market, the largest school of economic thought that still adheres to classical form is the Marxian school.

## **Monetary Theory**

British classical economists in the 19th century had a well-developed controversy between the Banking and the Currency school. This parallels recent debates between proponents of the theory of endogenous money, such as Nicholas Kaldor, and monetarists, such as Milton Friedman. Monetarists and members of the currency school argued that banks can and should control the supply of money. According to their theories, inflation is caused by banks issuing an excessive supply of money. According to proponents of the theory of endogenous money, the supply of money automatically adjusts to the demand, and banks can only control the terms (e.g., the rate of interest) on which loans are made.

## **Debates on the definition of Classical Economics**

The theory of value is currently a contested subject. One issue is whether classical economics is a forerunner of neoclassical economics or a school of thought that had a distinct theory of value, distribution, and growth.

Sraffians, who emphasize the discontinuity thesis, see classical economics as extending from William Petty's work in the 17th century to the break-up of the Ricardian system around 1830. The period between 1830 and the 1870s would then be dominated by "vulgar political economy", as Karl Marx characterized it. Sraffians argue that: the wages fund theory; Senior's abstinence theory of interest, which puts the return to capital on the same level as returns to land and labor; the explanation of equilibrium prices by well-behaved supply and demand functions; and Say's law, are not necessary or essential elements of the classical theory of value and distribution.

Perhaps Schumpeter's view that John Stuart Mill put forth a half-way house between classical and neoclassical economics is consistent with this view.

Sraffians generally see Marx as having rediscovered and restated the logic of classical economics, albeit for his own purposes. Others, such as Schumpeter, think of Marx as a follower of Ricardo. Even Samuel Hollander<sup>[4]</sup> has recently explained

that there is a textual basis in the classical economists for Marx's reading, although he does argue that it is an extremely narrow set of texts.

The first position is that neoclassical economics is essentially continuous with classical economics. To scholars promoting this view, there is no hard and fast line between classical and neoclassical economics. There may be shifts of emphasis, such as between the long run and the short run and between supply and demand, but the neoclassical concepts are to be found confused or in embryo in classical economics. To these economists, there is only one theory of value and distribution. Alfred Marshall is a well-known promoter of this view. Samuel Hollander is probably its best current proponent.

A second position sees two threads simultaneously being developed in classical economics. In this view, neoclassical economics is a development of certain exoteric (popular) views in Adam Smith. Ricardo was a sport, developing certain esoteric (known by only the select) views in Adam Smith. This view can be found in W. Stanley Jevons, who referred to Ricardo as something like "that able, but wrong-headed man" who put economics on the "wrong track". One can also find this view in Maurice Dobb's *Theories of Value and Distribution Since Adam Smith: Ideology and Economic Theory* (1973), as well as in Karl Marx's *Theories of Surplus Value*.

The above does not exhaust the possibilities. John Maynard Keynes thought of classical economics as starting with Ricardo and being ended by the publication of Keynes' *General Theory of Employment Interest and Money*. The defining criterion of classical economics, on this view, is Say's law.

One difficulty in these debates is that the participants are frequently arguing about whether there is a non-neoclassical theories that should be reconstructed and applied today to describe capitalist economies. Some, such as Terry Peach<sup>[5]</sup>, see classical economics as of antiquarian interest.

## **Economic nationalism**

**Economic nationalism** is a term used to describe policies which emphasize on domestic control of the economy, labor and capital formation, even if this requires the imposition of tariffs and other restrictions on the movement of labor, goods and capital. It is in opposition to globalization in many cases, or at least it questions the benefits of unrestricted free trade. Economic nationalism may include such doctrines as protectionism and import substitution.

Examples of this include Henry Clay's American System (economic system), Japan's use of MITI to "pick winners and losers", Malaysia's imposition of currency controls in the wake of the 1997 currency crisis, China's controlled exchange of the yuan, Argentina's economic policy of tariffs and devaluation in the wake of the 2001 financial crisis and the United States' use of tariffs to protect domestic steel production.

Instances became more visible from 2005 after several governments intervened to prevent takeovers of domestic firms by foreign companies. Some cases include:

The reason for a policy of economic protectionism in the cases above varied from bid to bid. In the case of Mittal's bid for Arcelor, the primary concerns involved job security for the Arcelor employees based in France and Luxembourg. The cases of French Suez and Spanish Endesa involved the desire for respective European governments to create a 'national champion' capable of competing at both a European and global level. Both the French and US government used national security as the reason for opposing takeovers of Danone, Unocal and the bid by DP World for 6 US ports. It should be noted that in none of the examples given above was the original bid deemed to be against the interests of competition. In many cases the shareholders supported the foreign bid. For instance in France after the bid for Suez by Enel was counteracted by the French public energy and gas company Gaz De France the shareholders of Suez complained and the unions of Gaz De France were in an uproar because of the privatization of their jobs.

## **Economic patriotism**

**Economic patriotism** is the coordinated and promoted behaviour of consumers or companies (both private and public) that consists of favoring the goods or services produced in their country or in their group of countries. Economic patriotism can be practiced either through demand stimulation (encouraging consumers to purchase the goods and services of their own country) or through supply protection, the shielding of the domestic market from foreign competition through tariffs or quotas (protectionism). A recently emerging form of economic patriotism is financial protectionism, the hostility against acquisitions by foreign groups by companies considered of "strategic value"<sup>[7]</sup> for the economy of the country.

## **Objectives**

The objective is to support economic activity and promote social cohesion. The supporters of economic patriotism describe it as a kind of self-defence of local economic interests (national or European in case of the countries of the European Union). Some manifestations of economic patriotism are attempts to block foreign competition or acquisitions of domestic companies. An often cited example is France, where economic patriotism was the main rationale used in the Pepsico-Danone, Mittal-Arcelor, and GDF-Suez affairs.

In the United States, an example of economic patriotism would be the numerous bumper stickers: "Be American, Buy American".

## **Criticisms**

Consumer preference for local goods give local producers more market power and allows local producers to lift prices to extract greater profits. This occurs because firms that produce locally-produced goods can charge a premium for that good. Consumers who favor products by local producers may end up being exploited by profit-maximizing local producers. For example, protectionist policy in America that

placed tariffs on foreign cars gave local producers Ford and GM market power that allowed them to raise prices of cars, which negatively affected American consumers who faced fewer choices and higher prices [2]. However, in most cases where no cartel is formed, the market forces will create competition for local products, and cause prices to drop.

Because locally-produced goods can attract a premium if consumers show a preference towards it, a firm has an incentive to pass foreign goods off as local goods if foreign goods have cheaper costs of production than local goods. They are able to do this because the line between foreign-made and locally-made is blurry. This brings up the issue of the definition of local goods. For example, while a particular car may be assembled in America its engine may be made in another country, say, China. Furthermore, while the engine may be made in China, the engine's components may be made in several other countries, e.g. the pistons may come from Germany and the spark plugs may come from Mexico. The components that make up the spark plugs and pistons may come from different countries and so on.

### **TOIC 3;Economic growth**

**Economic growth** is a term used to indicate the increase of total GDP. It is often measured as the rate of change of gross domestic product (GDP). Economic growth refers only to the quantity of goods and services produced; it says nothing about the way in which they are produced. Economic development, a related term, refers to change in the way goods and services are produced; positive economic development involves the introduction of more efficient or "productive" technologies or forms of social organisation.

Economic growth is that branch of one,which deals with the study of rate of change of gross domestic product,referring to the quantity of goods and services produced.

Economic growth can either be positive or negative. Negative growth can also be referred to by saying that the economy is *shrinking*. Negative growth is associated with economic recession and economic depression.

Gross national product (GNP) is sometimes used as an alternative measure to gross domestic product. In order to compare multiple countries, the statistics may be quoted in a single currency, based on either prevailing exchange rates or purchasing power parity. Then, in order to compare countries of different population sizes, the per capita figure is quoted. To compensate for changes in the value of money (inflation or deflation) the GDP or GNP is usually given in "real" or inflation adjusted, terms rather than the actual money figure compiled in a given year, which is called the nominal or current figure.

GDP per capita is not the same thing as earnings per worker since GDP measures only monetary transactions for all final goods and services in a country without regard to who receives that money.

### **Short-term stabilization and long-term growth**

Economists draw a distinction between short-term economic stabilization and long-term economic growth. The topic of economic growth is primarily concerned with the long run.

The short-run variation of economic growth is termed the business cycle.

The long-run path of economic growth is one of the central questions of economics; in spite of the problems of measurement, an increase in GDP of a country is generally taken as an increase in the standard of living of its inhabitants. Over long periods of time, even small rates of annual growth can have large effects through compounding (see exponential growth). A growth rate of 2.5% per annum will lead to a doubling of GDP within 28 years, whilst a growth rate of 8% per annum (experienced by some Four Asian Tigers) will lead to a doubling of GDP within 9 years. This exponential characteristic can exacerbate differences across nations.

In the early 20th century, it became the policy of most country's governments to encourage growth of this kind. To do this required enacting policies, and being able to measure the results of those policies. This gave rise to the importance of econometrics, or the field of creating measurements for underlying conditions. Terms such as "unemployment rate", "Gross Domestic Product" and "rate of inflation" are part of the measuring of the changes in an economy.

## **Various theories on Economic Growth**

### **Origins of the concept**

In 1377, the Arabian economic thinker Ibn Khaldun provided one of the earliest descriptions of economic growth in his famous *Muqaddimah* (known as *Prolegomena* in the Western world):

"When civilization [population] increases, the available labor again increases. In turn, luxury again increases in correspondence with the increasing profit, and the customs and needs of luxury increase. Crafts are created to obtain luxury products. The value realized from them increases, and, as a result, profits are again multiplied in the town. Production there is thriving even more than before. And so it goes with the second and third increase. All the additional labor serves luxury and wealth, in contrast to the original labor that served the necessity of life."<sup>[1]</sup>

In the early modern period, some people in Western European nations developed the idea that economies could "grow", that is, produce a greater economic surplus which could be expended on something other than mere subsistence. This surplus could then be used for consumption, warfare, or civic and religious projects. The previous view was that only increasing either population or tax rates could generate more surplus money for the Crown or country.

Now it is generally recognized that economic growth also corresponds to a process of continual rapid replacement and reorganization of human activities facilitated by investment motivated to maximize returns. This exponential evolution of our self-organized life-support and cultural systems is remarkably creative and flexible, but



highly unpredictable in many ways. As there are difficulties in modelling complex self-organizing systems, various efforts to model the long term evolution of economies have produced mixed results.

During much of the "Mercantilist" period, growth was seen as involving an increase in the total amount of specie, that is circulating medium such as silver and gold, under the control of the state. This "Bullionist" theory led to policies to force trade through a particular state, the acquisition of colonies to supply cheaper raw materials which could then be manufactured and sold.

Later, such trade policies were justified instead simply in terms of promoting domestic trade and industry. The post-Bullionist insight that it was the increasing capability of manufacturing which led to policies in the 1700s to encourage manufacturing in itself, and the formula of importing raw materials and exporting finished goods. Under this system high tariffs were erected to allow manufacturers to establish "factories". Local markets would then pay the fixed costs of capital growth, and then allow them to export abroad, undercutting the prices of manufactured goods elsewhere. Once competition from abroad was removed, prices could then be increased to recoup the costs of establishing the business.

Under this theory of growth, one policy attempted to foster growth was to grant monopolies, which would give an incentive for an individual to exploit a market or resource, confident that he would make all of the profits when all other extra-national competitors were driven out of business. The "Dutch East India company" and the "British East India company" were examples of such state-granted trade monopolies.

In this period the view was that growth was gained through "advantageous" trade in which specie would flow in to the country, but to trade with other nations on equal terms was disadvantageous. It should be stressed that Mercantilism was not simply a matter of restricting trade. *Within* a country, it often meant breaking down trade barriers, building new roads, and abolishing local toll booths, all of which expanded markets. This corresponded to the centralization of power in the hands of the Crown (or "Absolutism"). This process helped produce the modern nation-state in Western Europe.

Internationally, Mercantilism led to a contradiction: growth was gained through trade, but to trade with other nations on equal terms was disadvantageous.

### **Classical growth theory**

The modern conception of economic growth began with the critique of Mercantilism, especially by the physiocrats and with the Scottish Enlightenment thinkers such as David Hume and Adam Smith, and the foundation of the discipline of modern political economy. The theory of the physiocrats was that productive capacity, itself, allowed for growth, and the improving and increasing capital to allow that capacity was "the wealth of nations". Whereas they stressed the importance of agriculture and saw urban industry as "sterile", Smith extended the notion that manufacturing was central to the entire economy.

David Ricardo argued that trade was a benefit to a country, because if one could buy a good more cheaply from abroad, it meant that there was more profitable work to be done here. This theory of "comparative advantage" would be the central basis for arguments in favor of free trade as an essential component of growth.

## **Creative destruction and economic growth**

: Creative destruction

Many economists view entrepreneurship as having a major influence on a society's rate of technological progress and thus economic growth.<sup>[2]</sup> Joseph Schumpeter was a key figure in understanding the influence of entrepreneurs on technological progress.<sup>[2]</sup> In Schumpeter's *Capitalism, Socialism and Democracy*, published in 1942, an entrepreneur is a person who is willing and able to convert a new idea or invention into a successful innovation. Entrepreneurship forces "creative destruction" across markets and industries, simultaneously creating new products and business models. In this way, creative destruction is largely responsible for the dynamism of industries and long-run economic growth. Former Federal Reserve chairman Alan Greenspan has described the influence of creative destruction on economic growth as follows: "Capitalism expands wealth primarily through creative destruction—the process by which the cash flow from obsolescent, low-return capital is invested in high-return, cutting-edge technologies."<sup>[3]</sup>

## **The neo-classical growth model**

: Ramsey growth model and Exogenous growth model

The notion of growth as increased stocks of capital goods (means of production) was codified as the Solow-Swan Growth Model, which involved a series of equations which showed the relationship between labor-time, capital goods, output, and investment. According to this view, the role of technological change became crucial, even more important than the accumulation of capital. This model, developed by Robert Solow<sup>[4]</sup> and Trevor Swan<sup>[5]</sup> in the 1950s, was the first attempt to model long-run growth analytically. This model assumes that countries use their resources efficiently and that there are diminishing returns to capital and labor increases. From these two premises, the neoclassical model makes three important predictions. First, increasing capital relative to labor creates economic growth, since people can be more productive given more capital. Second, poor countries with less capital per person will grow faster because each investment in capital will produce a higher return than rich countries with ample capital. Third, because of diminishing returns to capital, economies will eventually reach a point at which no new increase in capital will create economic growth. This point is called a "steady state".

The model also notes that countries can overcome this steady state and continue growing by inventing new technology. In the long run, output per capita depends on the rate of saving, but the rate of output growth should be equal for any saving rate. In this model, the process by which countries continue growing despite the diminishing returns is "exogenous" and represents the creation of new technology that allows production with fewer resources. Technology improves, the steady state

level of capital increases, and the country invests and grows. The data does not support some of this model's predictions, in particular, that all countries grow at the same rate in the long run, or that poorer countries should grow faster until they reach their steady state. Also, the data suggests the world has slowly increased its rate of growth.<sup>[6]</sup>

However modern economic research shows that this model of economic growth is not supported by the evidence. Calculations made by Solow claimed that the majority of economic growth was due to technological progress rather than inputs of capital and labour. Recent economic research has, however, found the calculations made to support this claim to be invalid as they do not take into account changes in both investment and labour inputs.

Dale Jorgenson, of Harvard University, President of the American Economic Association in 2000, concludes that: 'Griliches and I showed that changes in the quality of capital and labor inputs and the quality of investment goods explained most of the Solow residual. We estimated that capital and labor inputs accounted for 85 percent of growth during the period 1945–1965, while only 15 percent could be attributed to productivity growth... This has precipitated the sudden obsolescence of earlier productivity research employing the conventions of Kuznets and Solow.'<sup>[7]</sup>

John Ross has analysed the long term correlation between the level of investment in the economy, rising from 5-7% of GDP at the time of the Industrial Revolution in England, to 25% of GDP in the post-war German 'economic miracle', to over 35% of GDP in the world's most rapidly growing contemporary economies of India and China.<sup>[8]</sup>

Taking the G7 economies and the largest non-G7 economies Jorgenson and Vu conclude in considering: 'the growth of world output between input growth and productivity... input growth greatly predominated... Productivity growth accounted for only one-fifth of the total during 1989-1995, while input growth accounted for almost four-fifths. Similarly, input growth accounted for more than 70 percent of growth after 1995, while productivity accounted for less than 30 percent.'

Regarding differences in output per capita Jorgenson and Vu conclude: 'differences in per capita output levels are primarily explained by differences in per capital input, rather than variations in productivity.'<sup>[9]</sup>

## **Development economics**

development economics

The latter half of the 20th century, with its global economy of a few very wealthy nations and many very poor nations, led to the study of how the transition from subsistence and resource-based economies to production and consumption based-economies occurred. This led to the field of development economics, including the work of Nobel laureates Amartya Sen and Joseph Stiglitz. However this model of economic development does not meet the demands of subaltern populations and has been severely criticized by later theorists. PROTAP

## New growth theory

### Endogenous growth theory

Growth theory advanced again with the theories of economist Paul Romer in the late 1980s and early 1990s. Other important new growth theorists include Robert E. Lucas and Robert J. Barro.

Unsatisfied with Solow's explanation, economists worked to "endogenize" technology in the 1980s. They developed the endogenous growth theory that includes a mathematical explanation of technological advancement.<sup>[10][11]</sup> This model also incorporated a new concept of human capital, the skills and knowledge that make workers productive. Unlike physical capital, human capital has increasing rates of return. Therefore, overall there are constant returns to capital, and economies never reach a steady state. Growth does not slow as capital accumulates, but the rate of growth depends on the types of capital a country invests in. Research done in this area has focused on what increases human capital (e.g. education) or technological change (e.g. innovation).<sup>[6]</sup> Recent empirical analyses suggest that differences in cognitive skills, related to schooling and other factors, can largely explain variations in growth rates across countries.<sup>[12]</sup>

### Other theories

Theories of economic growth, the mechanisms that let it take place and its main determinants abound. One popular theory in the 1970s for example was that of the "Big Push" which suggested that countries needed to jump from one stage of development to another through a virtuous cycle in which large investments in infrastructure and education coupled to private investment would move the economy to a more productive stage, breaking free from economic paradigms appropriate to a lower productivity stage.<sup>[13]</sup>

Analysis of recent economies' success shows a close correlation between growth and climate. It is possible that there is absolutely no actual mechanism between the two, and the relation may be spurious. In early human history, economic as well as cultural development was concentrated in warmer parts of the world, like Egypt.

According to Acemoğlu, Johnson and Robinson, the positive correlation between high income and cold climate is a by-product of history.<sup>[citation needed]</sup> Europeans adopted very different colonization policies in different colonies, with different associated institutions. In places where these colonizers faced high mortality rates (e.g., due to the presence of tropical diseases), they could not settle permanently, and they were thus more likely to establish extractive institutions, which persisted after independence; in places where they could settle permanently (e.g., those with temperate climates), they established institutions with this objective in mind and modeled them after those in their European homelands. In these 'neo-Europes' better institutions in turn produced better development outcomes. Thus, although others economists focus on the identity or type of legal system of the colonizers to explain institutions, these authors look at the environmental conditions in the colonies to explain institutions. For instance, former colonies have inherited corrupt

governments and geo-political boundaries (set by the colonizers) that are not properly placed regarding the geographical locations of different ethnic groups; this creates internal disputes and conflicts, which in turn hinders development. In another example, societies that emerged in colonies without solid native populations, established better property rights and incentives for long-term investment than those where native populations were large.<sup>[citation needed]</sup>

## Effects of growth

Economic growth has undeniable effects on the living conditions of the peoples of the earth. However, whether these effects are on balance positive or negative is currently open to debate.

### Positive effects

Economist Xavier Sala-i-Martin argues that global income inequality is diminishing,<sup>[14]</sup> and the World Bank argues that the rapid reduction in global poverty is in large part due to economic growth.<sup>[15]</sup> The decline in poverty has been the slowest where growth performance has been the worst (ie. in Africa).<sup>[16]</sup>

Happiness has been shown to increase with a higher GDP per capita, at least up to a level of \$15,000 per person.<sup>[17]</sup>

Many earlier predictions of resource depletion, such as Thomas Malthus' 1798 predictions about approaching famines in Europe,<sup>[18]</sup> *The Population Bomb* (1968),<sup>[19][20][21]</sup> *Limits to Growth* (1972),<sup>[19][20][21]</sup> and the Simon-Ehrlich wager (1980)<sup>[22]</sup> have proven false, one reason being that advancements in technology and science have continually allowed previously unavailable resources to be utilized more economically.<sup>[22]</sup> The book *The Improving State of the World* argues that the state of humanity is rapidly improving.

Those more optimistic about the environmental impacts of growth believe that, although localized environmental effects may occur, large scale ecological effects are minor. The argument as stated by economists such as Julian Lincoln Simon states that if these global-scale ecological effects exist, human ingenuity will find ways of adapting to them.<sup>[23]</sup>

Economists theorize that economies are driven by new technology and ongoing improvements in efficiency — for instance, we have faster computers today than a year ago, but not necessarily computers requiring more natural resources to build.<sup>[citation needed]</sup> Also, physical limits may be very large if considering all the minerals in the planet Earth or all possible resources from space colonization, such as solar power satellites, asteroid mining, or a Dyson sphere. The book *Mining the Sky: Untold Riches from the Asteroids, Comets, and Planets* is one example of such arguments. However, depletion and declining production from old resources can sometimes occur before new resources are ready to replace them. This is, in part, the logical basis of the Peak Oil theory. Although individual oil wells and mines for other nonrenewable resources are often depleted, the availability of these resources has generally risen and their prices have dropped over the long-run.<sup>[citation needed]</sup>

## Negative effects

A number of critical arguments have been raised against economic growth.<sup>[24]</sup>

Economic growth may reflect or create a decline in the quality of life, such as crime, prisons, or pollution, in what is known as uneconomic growth. Other aspects of economic growth that affect quality of life, such as its effects on the environment, are externalized, and not traded or accounted for in the market. Growth leads to consumerism by encouraging the creation of artificial needs: Industries cause consumers to develop new taste, and preferences for growth to occur. Consequently, "wants are created, and consumers have become the servants, instead of the masters, of the economy."<sup>[24]</sup> The ecological footprint of economic growth has been shown to create an unsustainable drain on the earth's resources. The 2007 United Nations GEO-4 report warns that we are living far beyond our means. The human population is now larger and that the amount of resources it consumes takes up a lot of those resources available. Humanity's environmental demand is purported to be 21.9 hectares per person while the Earth's biological capacity is purported to be 15.7 ha/person.<sup>[25]</sup> This report supports the basic arguments and observations made by Thomas Malthus in the early 1800s, that is, economic growth depletes non-renewable resources rapidly.<sup>[26]</sup> Economic inequality has increased; the gap between the poorest and richest countries in the world has been growing.<sup>[27]</sup> Although mean and median wealth has increased globally, it adds to the inequality of wealth.

Some critics argue that a narrow view of economic growth, combined with globalization, is creating a scenario where we could see a systemic collapse of our planet's natural resources.<sup>[28]</sup> Other critics draw on archaeology to cite examples of cultures they claim have disappeared because they grew beyond the ability of their ecosystems to support them.<sup>[29]</sup> Concerns about possible negative effects of growth on the environment and society led some to advocate lower levels of growth, from which comes the ideas of uneconomic growth and de-growth, and Green parties which argue that economies are part of a global society and a global ecology and cannot outstrip their natural growth without damaging them.

The Austrian School argues that the concept of "growth" or the creation and acquisition of more goods and services is dependent upon the relative desires of the individual. Someone may prefer having more leisure time to acquiring more goods and services, but this fulfilment of desires would have a negative effect on GDP increase. Also, they claim that the notion of growth implies the need for a "central planner" within an economy. To Austrian economists, such an ideal is antithetical to the concept of a free market economy, which best satisfies the wants of consumers. As such, Austrian economists believe that the individual should determine how much "growth" s/he desires.<sup>[30]</sup>

Canadian scientist, David Suzuki stated in the 1990s that ecologies can only sustain typically about 1.5-3% new growth per year, and thus any requirement for greater returns from agriculture or forestry will necessarily cannibalize the natural capital of soil or forest.<sup>[citation needed]</sup> Some think this argument can be applied even to more developed economies.<sup>[citation needed]</sup>

## Growth 'to a point'

The two theories can be reconciled if it is recognised that growth improves the quality of life to a point, after which it doesn't improve the quality of life, but rather obstructs sustainable living.<sup>[31]</sup> Historically, sustained growth has reached its limits (and turned to catastrophic decline) when perturbations to the environmental system last long enough to destabilise the bases of a culture.<sup>[31]</sup>

## Implications of Global Warming

Up to the present there are close correlations of economic growth with carbon dioxide emissions across nations, although considerable divergence in carbon intensity (carbon emissions per GDP).<sup>[32]</sup> The Stern Review notes that "under business as usual, global emissions will be sufficient to propel greenhouse-gas concentrations to over 550ppm CO<sub>2</sub>e by 2050 and over 650-700ppm by the end of this century is robust to a wide range of changes in model assumptions". This is in contrast with scientist consensus that planetary ecosystem functioning without incurring dangerous risks requires stabilization at 450-550ppm.<sup>[33]</sup>

As a consequence, growth oriented environmental economists propose massive government intervention into switching sources of energy production, favouring wind, solar, hydroelectric and nuclear. This would largely confine use of fossil fuels to either domestic cooking needs (such as for kerosene burners) or where carbon capture and storage technology can be cost-effective and reliable.<sup>[34]</sup> The Stern Review, published by the United Kingdom Government in 2006, concluded that an investment of 1% of GDP per annum would be sufficient to avoid the worst effects of climate change, and that failure to do so could risk global GDP being 20% lower than it otherwise might be. Because carbon capture and storage is as yet widely unproven, and its long term effectiveness (such as in containing carbon dioxide 'leaks') unknown, and because of current costs of alternative fuels these policy responses largely rest on faith on technological change.

On the other hand, Nigel Lawson claimed that people in a hundred years' time would be "seven times as well off as we are today", therefore it is not reasonable to impose sacrifices on the "much poorer present generation".<sup>[35]</sup>

## TOPIC 4;Capital accumulation

Most generally, the **accumulation of capital** refers simply to the gathering or amassment of objects of value; the increase in wealth; or the creation of wealth. Capital can be generally defined as assets invested with the expectation that their value will increase, usually because there is the expectation of profit, rent, interest, royalties, capital gain or some other kind of return.

The definition of capital accumulation is subject to controversy and ambiguities, because it could refer to a *net addition* to existing wealth, or to a *redistribution* of wealth. If more wealth is produced than there was before, a society becomes richer;

the total stock of wealth increases. But if some accumulate capital only at the expense of others, wealth is merely shifted from A to B. In principle, it is possible that a few people or organisations accumulate capital and grow richer, although the total stock of wealth of society decreases. Most often, capital accumulation involves both a net addition and a redistribution of wealth, which may raise the question of who really benefits from it most.

In economics, accounting and Marxian economics, **capital accumulation** is often equated with investment of profit income or savings, especially in real capital goods. The **concentration and centralisation of capital** are two of the results of such accumulation (see below).

But capital accumulation can refer variously to

- real investment in tangible means of production.
- financial investment in assets represented on paper, yielding profit, interest, rent, royalties, fees or capital gains.
- investment in *non-productive* physical assets such as residential real estate or works of art that appreciate in value.
- "human capital accumulation," i.e., new education and training increasing the skills of the (potential) labour force which can increase earnings from work.

Non-financial and financial capital accumulation is usually needed for economic growth, since additional production usually requires additional funds to enlarge the scale of production. Smarter and more productive organization of production can also increase production without increased capital. Capital can be created without increased investment by inventions or improved organization that increase productivity, discoveries of new assets (oil, gold, minerals, etc.), the sale of property, etc.

In modern macroeconomics and econometrics the term *capital formation* is often used in preference to "accumulation", though UNCTAD refers nowadays to "accumulation". The term is occasionally used in national accounts.

### **The measurement of accumulation**

Accumulation can be measured as the monetary value of investments, the amount of income that is reinvested, or as the change in the value of assets owned (the increase in the value of the capital stock). Using company balance sheets, tax data and direct surveys as a basis, government statisticians estimate total investments and assets for the purpose of national accounts, national balance of payments and flow of funds statistics. Usually the Reserve Banks and the Treasury provide interpretations and analysis of this data. Standard indicators include Capital formation, Gross fixed capital formation, fixed capital, household asset wealth, and foreign direct investment.

Organisations such as the International Monetary Fund, UNCTAD, the World Bank Group, the OECD, and the Bank for International Settlements used national investment data to estimate world trends. The Bureau of Economic Analysis,



Eurostat and the Japan Statistical Office provide data on the USA, Europe and Japan respectively.

Other useful sources of investment information are business magazines such as Fortune, Forbes, The Economist, Business Week etc. as well as various corporate "watchdog" organisations and NGO publications. A reputable scientific journal is the *Review of Income & Wealth*. In the case of the USA, the "Analytical Perspectives" document (an annex to the yearly budget) provides useful wealth and capital estimates applying to the whole country.

### **Psychology, sociology and ethics of capital accumulation**

There have been numerous psychological and sociological studies of the motivations of investment behaviour by individuals. Most of these suggest that the propensity to accumulate capital is associated with qualities such as an intelligent understanding of property ownership, a positive attitude towards money, the ability to seize a money-making opportunity, and a desire to acquire more wealth. These are not innate or genetic qualities, but learned through social experience.

However, even if a strong motivation for enrichment or social improvement exists, the business, government, legal, climate, local culture or social instability may prevent this motivation from being realised. Hernando de Soto for example argues that the reason why poor countries are poor is mainly because of the absence of a legal-cultural infrastructure of "asset management" and of formalised and enforced private property rights. Many systems seemed designed to keep a small minority in power so they can consume more. This power minority exist as a parasite on the common people—consuming much more than they produce. One popular argument in this respect remains the vicious cycle of poverty: the poor are poor because they are poor. Critics of this argument object it is an uninformative and unhelpful tautology.

Greed and desire can play a very important role in capital accumulation, but are not a necessary requirement. Indeed according to Max Weber's study of capitalism and the Protestant ethic, frugality, sobriety, deferred consumption and saving were among the key values of the rising bourgeoisie in the age of the Reformation.

Some economic historians (e.g. David Landes, Gregory Clark (economist)) refer to national psychology and argue that some nations or cultures (e.g. Europe) are inherently better equipped for capital accumulation, due to cultural habits, customs and values.

Other economic historians (e.g. Paul A. Baran) have argued that psychological factors explain very little, because a nation which previously had a low level of accumulation can suddenly "take off". In that case, the causes must be sought in the prevailing social relations.

Controversies about the ethics of accumulation have occurred ever since commercial trade began. If informal and formal prostitution is regarded as the oldest profession, the first ethical debate about accumulation must have occurred tens of thousands of

years ago at the very least. The problem is that trade or market forces do not create any particular morality of their own, beyond the requirement to meet contractual obligations that settle transactions. Some forms of trade may be accepted, others rejected, but there exists no general moral principle for this which can be derived from the trade itself.

A good contemporary illustration of this problem is the gigantic increase in total reported crime and the grey economy or shadow economy after the deregulation of world markets from the 1980s, and the marketisation of the USSR and China. But ancient philosophers and theologians already knew about the problem, which is why they were intensely preoccupied with the politics of the "rule of law" and its enforcement.

The main ethical questions concern which *routes to wealth* are morally justifiable, and what entitles individuals and groups to appropriate amounts of wealth, in particular wealth which they have not themselves created. The medieval economists invented theories of a just price and the moral debate surfaces again these days e.g. in the controversies about fair trade, imperialism and Islamic banking. Neo-liberal theory emphasises that a "good" person is one who creates new wealth by deferring consumption or improving production, while socialist theory says a "good" person should be forced to share their wealth however accumulated. The most popular moral theories are similar to that of John Rawls.

Karl Marx illustrated his analysis with sarcastic comments about "Christian accumulation"; some forms of accumulation were believed to be compatible with Jesus Christ, while others were not; some forms of accumulation were forgiven by God afterwards, others were not. Martin Luther for example raged against usury and extortion.

Marxism-Leninism is hostile to all private property and market activity. It must be kept in mind that the "private property" that Marx refers to is the ownership of the means of production by a generally small elite of wealthy entrepreneurs. The proletariat, or laborer, is inferior to all aspects of production—including labor, the products or services made, and revenue; and therefore the division of labor and its products must be equally redistributed to avoid the control and degradation of an unknown bourgeoisie.

But because capital accumulation does not presuppose any particular or specific "moral system", accumulation can also continue regardless of any particular morality advocated by popes, presidents, queens, journalists, pop stars, business tycoons or anybody else. All that is required is (1) the ability to own assets and trade in them and (2) sufficient income beyond subsistence and (3) the will to defer consumption to be able to accumulate capital.

### **Marxian concept of capital accumulation**

In Karl Marx's critique of political economy, capital accumulation refers to the operation whereby a sum of money is transformed into a larger sum of money (capitalism is this money-making activity, although Marxists often equate capitalism

with the capitalist mode of production). Here, capital is defined essentially as economic or commercial asset value in search of additional value or surplus-value. This requires property relations which enable objects of value to be appropriated and owned.

According to Marx, capital accumulation has a double origin, namely in trade and in expropriation, both of a legal or illegal kind. The reason is that a stock of capital can be increased through a process of exchange or "trading up" but also through directly taking an asset or resource from someone else, without compensation. David Harvey calls this accumulation by dispossession. Marx does not discuss gifts and grants as a source of capital accumulation, nor does he analyze taxation in detail. Nowadays the tax take is often so large (i.e. 25-40% of GDP) that some authors refer to state capitalism. This gives rise to a proliferation of tax havens to evade tax liability.

The continuation and progress of capital accumulation depends on the removal of obstacles to the expansion of trade, and this has historically often been a violent process. As markets expand, more and more new opportunities develop for accumulating capital, because more and more types of goods and services can be traded in. But capital accumulation may also confront resistance, when people refuse to sell, or refuse to buy (for example a strike by investors or workers, or consumer resistance). What spurs accumulation is competition; in business, if you don't go forward, you go backward, and unless the law prevents it, the strong will exploit the weak.

In general, Marx's critique of capital accumulation is that the human chase after wealth and self-enrichment leads to inhuman consequences. The enrichment of some is at the expense of the immiseration of others, and competition becomes brutal. The basis of it all is the exploitation of the labour effort of others. When the "economic cake" expands, this may be obscured because all can gain from trade. But when the "economic cake" shrinks, then capital accumulation can only occur by taking income or assets from other people, other social classes, or other nations. The point is that to exist, capital must always grow, and to ensure that it will grow, people are prepared to do almost anything.

### **Concentration and centralization**

According to Marx, capital has the tendency for concentration and centralization the hands of richest capitalists. Marx explains:

"It is concentration of capitals already formed, destruction of their individual independence, expropriation of capitalist by capitalist, transformation of many small into few large capitals ... Capital grows in one place to a huge mass in a single hand, because it has in another place been lost by many ... The battle of competition is fought by cheapening of commodities. The cheapness of commodities demands, caeteris paribus, on the productiveness of labour, and this again on the scale of production. Therefore, the larger capitals beat the smaller. It will further be remembered that, with the development of the capitalist mode of production, there is an increase in the minimum amount of individual capital necessary to carry on a business under its normal conditions. The smaller capitals, therefore, crowd into

spheres of production which Modern Industry has only sporadically or incompletely got hold of. Here competition rages ... It always ends in the ruin of many small capitalists, whose capitals partly pass into the hands of their conquerors, partly vanish." ("Das Kapital", vol.1, ch. 25)

### **The rate of accumulation**

In Marxian economics, the *rate of accumulation* is defined as (1) the value of the real net increase in the stock of capital in an accounting period, (2) the proportion of realised surplus-value or profit-income which is reinvested, rather than consumed. This rate can be expressed by means of various ratios between the original capital outlay, the realised turnover, surplus-value or profit and reinvestments (see e.g. the writings of the economist Michal Kalecki).

Other things being equal, the greater the amount of profit-income that is disbursed as personal earnings and used for consumptive purposes, the lower the savings rate and the lower the rate of accumulation is likely to be. However, earnings spent on consumption can also stimulate market demand and higher investment. This is the cause of endless controversies in economic theory about "how much to spend, and how much to save".

In a boom period of capitalism, the growth of investments is cumulative, i.e. one investment leads to another, leading to a constantly expanding market, an expanding labor force, and an increase in the standard of living for the majority of the people.

In a stagnating, decadent capitalism, the accumulation process is increasingly oriented towards investment on military and security forces, real estate, financial speculation, and luxury consumption. In that case, income from value-adding production will decline in favour of interest, rent and tax income, with as a corollary an increase in the level of permanent unemployment.

As a rule, the larger the total sum of capital invested, the higher the return on investment will be. The more capital one owns, the more capital one can also borrow and reinvest at a higher rate of profit or interest. The inverse is also true, and this is one factor in the widening gap between the rich and the poor.

Ernest Mandel emphasized that the rhythm of capital accumulation and growth depended critically on (1) the division of a society's social product between "necessary product" and "surplus product", and (2) the division of the surplus product between investment and consumption. In turn, this allocation pattern reflected the outcome of competition among capitalists, competition between capitalists and workers, and competition between workers. The pattern of capital accumulation can therefore never be simply explained by commercial factors, it also involved social factors and power relationships.

### **The origin of capital accumulation in trade**

In the simplest circuit of commercial trade, a sum of money  $M$  is loaned and returned with interest as the larger sum  $M'$ . Or, as a variation,  $M$  is traded for another currency, which rises in value. In counter-trade (a form of barter in which money may be used only to value goods and services), a commodity  $C$  exchanges for another commodity  $C'$ , which may also result in a larger sum of value. Marx calls the additional value surplus-value.

In a slightly more complex trading circuit, a sum of money  $M$  buys a commodity  $C$  which upon sale yields a larger sum of money  $M'$ , which can be reinvested. Alternatively, the circuit  $C - M - C'$  could substitute for  $M - C - M'$  but in this case the enlarged value consists of commodities rather than of money. These circuits are basic to merchant trade.

In the more developed trading circuit of capitalism, however,  $M$  buys inputs  $C$  (means of production and labour-power) which through new production creates outputs  $C'$  and upon sale yield a larger sum of money  $M'$ . In this case, we are no longer dealing with merchant capitalism, but with capitalist industry (the capitalist mode of production: all or most of the inputs and outputs of production are available as marketed commodities, and the costs & benefits of total production are rationally calculated in price terms.

In modern capitalism, the circuits of finance, commerce and production have become exceedingly complex, often lack transparency and may involve multilateral exchanges or a lot of fictitious capital. The daily trading volume in the world's foreign exchange markets was estimated at \$1.88 trillion in 2004, as against \$590 billion in 1989 (current dollars) (Der Spiegel, special edition 4/2005, p. 107). By comparison, the New York Stock Exchange daily volume is said to be around \$25 billion a day, and the international futures markets are said to trade about \$35 billion worth of contracts a day. Speculative trading makes up the bulk of the daily trading volumes. Most rich people do not want to bother with the financial management of most of their wealth, and know little about it. Investment specialists make their money from investing the money of the rich using their superior market knowledge, contacts, networks and commercial skills.

### **The circuit of capital accumulation from production**

Strictly speaking, capital has accumulated only when realised profit income has been *reinvested* in capital assets. But the process of capital accumulation in production has, as suggested in the first volume of Marx's *Das Kapital*, at least 7 distinct but linked moments:

- The initial investment of capital (which could be borrowed capital) in means of production and labor power.
- The command over surplus-labour and its appropriation.
- The valorisation (increase in value) of capital through production of new outputs.
- The appropriation of the new output produced by employees, containing the added value.
- The realisation of surplus-value through output sales.

- The appropriation of realised surplus-value as (profit) income after deduction of costs.
- The reinvestment of profit income in production.

All of these moments do not refer simply to an "economic" or commercial process. Rather, they assume the existence of legal, social, cultural and economic power conditions, without which creation, distribution and circulation of the new wealth could not occur. This becomes especially clear when the attempt is made to create a market where none exists, or where people refuse to trade.

In fact Marx suggests that the original or primitive accumulation of capital often occurs through violence, plunder, slavery, robbery, extortion and theft. He argues that the capitalist mode of production requires that people must be forced to work in value-adding production for someone else, and for this purpose, they must be cut off from sources of income other than selling their labor power.

### **Simple and expanded reproduction**

In volume 2 of *Das Kapital*, Marx continues the story and shows that, with the aid of bank credit, capital in search of growth can more or less smoothly mutate from one form to another, alternately taking the form of money capital (liquid deposits, securities, etc.), commodity capital (tradeable products, real estate etc.), or production capital (means of production and labor power).

His discussion of the simple and expanded reproduction of the conditions of production offers a more sophisticated model of the parameters of the accumulation process as a whole. At simple reproduction, a sufficient amount is produced to sustain society at the given living standard; the stock of capital stays constant. At expanded reproduction, *more* product-value is produced than is necessary to sustain society at a given living standard (a surplus product; the additional product-value is available for investments which enlarge the scale and variety of production).

Yet there is no economic law according to which capital is necessarily re-invested in the expansion of production; that depends on anticipated profitability, market expectations and perceptions of investment risk. All that Marx proves is that in capitalism production of output is *conditional* on capital accumulation, i.e. at least in the longer term, if production is not profitable, it will close down.

Ernest Mandel introduced the additional concept of *contracted economic reproduction*, i.e. reduced accumulation where business operating at a loss outnumbers growing business, or economic reproduction on a decreasing scale, for example due to wars, natural disasters or devalorisation.

Balanced economic growth requires that different factors in the accumulation process expand in appropriate proportions. But markets themselves cannot spontaneously create that balance, in fact what drives business activity is precisely the imbalances between supply and demand: inequality is the motor of growth. This partly explains why the worldwide pattern of economic growth is very uneven and unequal, even although markets have existed almost everywhere for a very long time.

Some people argue that it also explains government regulation of market trade and protectionism.

### Capital accumulation as social relation

"Accumulation of capital" sometimes also refers in Marxist writings to the reproduction of capitalist social relations (institutions) on a larger scale over time, i.e., the expansion of the size of the proletariat and of the wealth owned by the bourgeoisie.

This interpretation emphasizes that capital ownership, predicated on command over labor, is a social relation: the growth of capital implies the growth of the working class (a "law of accumulation"). In the first volume of *Das Kapital* Marx had illustrated this idea with reference to Edward Gibbon Wakefield's theory of colonisation:

"...Wakefield discovered that in the Colonies, property in money, means of subsistence, machines, and other means of production, does not as yet stamp a man as a capitalist if there be wanting the correlative — the wage-worker, the other man who is compelled to sell himself of his own free-will. He discovered that capital is not a thing, but a social relation between persons, established by the instrumentality of things. Mr. Peel, he moans, took with him from England to Swan River, West Australia, means of subsistence and of production to the amount of £50,000. Mr. Peel had the foresight to bring with him, besides, 3,000 persons of the working-class, men, women, and children. Once arrived at his destination, "Mr. Peel was left without a servant to make his bed or fetch him water from the river." Unhappy Mr. Peel, who provided for everything except the export of English modes of production to Swan River!" - [1]

In the third volume of *Das Kapital*, Marx refers to the "fetishism of capital" reaching its highest point with *interest-bearing capital*, because now capital seems to grow of its own accord without anybody doing anything. In this case,

"The relations of capital assume their most externalised and most fetish-like form in interest-bearing capital. We have here  $M - M'$ , money creating more money, self-expanding value, without the process that effectuates these two extremes. In merchant's capital,  $M - C - M'$ , there is at least the general form of the capitalistic movement, although it confines itself solely to the sphere of circulation, so that profit appears merely as profit derived from alienation; but it is at least seen to be the product of a social relation, not the product of a mere thing. (...) This is obliterated in  $M - M'$ , the form of interest-bearing capital. (...) The thing (money, commodity, value) is now capital even as a mere thing, and capital appears as a mere thing. The result of the entire process of reproduction appears as a property inherent in the thing itself. It depends on the owner of the money, i.e., of the commodity in its continually exchangeable form, whether he wants to spend it as money or loan it out as capital. In interest-bearing capital, therefore, this automatic fetish, self-expanding value, money generating money, are brought out in their pure state and in this form it no longer bears the birth-marks of its origin. The social relation is consummated in the

relation of a thing, of money, to itself. - Instead of the actual transformation of money into capital, we see here only form without content." [2]

## Different forms of capital accumulation

Essentially, in capitalism the production of output *depends* on the accumulation of capital. The propensity to invest in production therefore depends a lot on expectations of profitability and sales volume, and on perceptions of market risk. If production stops being profitable, or if sales drop sharply, or if there is social instability, capital will exit more and more from the sphere of production. Or if it cannot or does not, rationalisation investments will be undertaken, to amalgamate unprofitable enterprises into profitable units.

As a corollary, capital accumulation may be the accumulation of *production capital* (industrial assets), or the accumulation of *money capital* (financial assets), or the accumulation of *commodity capital* (products, real estate etc. which can be traded).

But irrespective of whether the additional capital value (or surplus-value happens to take the form of profit, interest, rent, or some kind of tax impost or royalty income, what drives the accumulation process is the perpetual search for more surplus-value, for added value as such.

This requires a constant supply of a labor force which can conserve and add value to inputs and capital assets, and thus create a higher value. Normally, the socio-economic compulsion to work for a living in capitalist society is legally enforced and regulated by the state, for example through workfare and strict conditions for receiving an unemployment benefit.

Although capital accumulation does not necessarily require production, ultimately the basis for it is value-adding production which makes net additions to the stock of wealth. Capital can accumulate by shifting the ownership of assets from one place to another, but ultimately the total stock of assets must increase. Other things being equal, if production fails to grow sufficiently, the level of debt will increase, ultimately causing a breakdown of the accumulation process when debtors cannot pay creditors.

Capital *accumulation* does not necessarily require trade either, although capital presupposes trade, and the ability to exchange goods for money. The reason is that wealth can be amassed through illegal or legalised expropriation (robbery, plunder, theft, piracy, slavery, embezzlement, fraud and so on). However, a continuous and cumulative accumulation process always presupposes that capital ownership is secure. Consequently, military and police forces have typically been necessary for capital accumulation on a larger scale, to protect property.

In medieval society, typically the bourgeoisie could not protect its capital assets permanently from attacks, which meant that the accumulation process was interrupted, and remained limited in scope. Today however, capitalists can own billions of dollars worth of assets which are well-protected against crime (see the



annual Merrill-Lynch survey of the world's wealthy). With the aid of private banking it is easier to obscure or hide the wealth that one owns.

## **Regime of accumulation**

Both the Regulation School of French Marxist economists, inspired by the original writings of Michel Aglietta and developed by Robert S. Boyer, as well as the American social structure of accumulation school founded by the economists Samuel Bowles and David Gordon have emphasized that the processes of capital accumulation occur within a social regime of accumulation.

In other words, a specific political and socio-economic environment is required that enables sustained investment and economic growth. This environment is created partly by state policy, but partly by also by technological innovations, changes in popular culture, commercial developments, the media, and so on. An example of such a regime often cited here is that of Fordism, named after the enterprise of Henry Ford. As the pattern of accumulation changes, the regime of accumulation also changes.

Similar ideas also surface in institutional economics. The main insight here is that market trade cannot flourish without regulation by a legal system plus the enforcement of basic moral conduct and private property by the state. But the regime of accumulation responds to the total experience of living in capitalist society, not just market trade.

## **Environmental criticism of capital accumulation**

The environmental criticism of capital accumulation focuses on four main ideas.

Firstly, there is the problem of externalities. This means that public or privately owned industry incurs costs, including environmental and health costs, which are not charged or priced. This happens for example when effluents are discharged on land, water or in the air, which can cause pollution or despoilation of terrains. In recognition of this, environmental taxes are sometimes imposed.

Secondly, commercial activities which may be rational from the point of view of a narrow public or private enterprise may not be rational from the point of view of the larger society, or from the point of view of the biosphere, especially when they involve the destruction of natural habitats of flora and fauna, pollution and entropy.

Because a natural resource happens to be a freely available good (for example fish in the open sea), it may be over utilized by either public or private enterprises. Or, a lot of energy may be wasted producing and transporting a good to the consumer. Or, the disturbance of subsistence economics by commerce may cause overpopulation by not controlling population by starvation.

Thirdly, goods and services may be produced for public or private profit in ways which are directly or indirectly harmful to human life, either because of the nature of

the use-value involved, or because of the techniques used to produce them, or because they encourage consumer habits with harmful effects.

Finally, business and cultural ethics may often not be reconcilable with some human ethics or good environmental ethics. This means for example that the imputation of a price to an environmental cost, or imposing an environment tax may be insufficient as a policy, because some things which have value simply have no price.

Nowadays environmental concerns are an essential part of so-called socially responsible business and corporate governance. However, opinion is divided about whether a capitalist market economy can be ecologically sustainable. Some argue that the experience of wide spread environmental destruction in the Soviet Union and China proves that state socialism or command economy can be ecologically worse than capitalism. Today [2005] some environmentalists consider capitalism, or the "free market system" as it is usually called, incapable of complying with the basic requisites of a sustainable and respectful habitation of planet earth. A major problem, inherent in some free market production dynamics, is the constant desire to constantly expand production. In this particular regard, critics point to the penchant to plan in short-term cycles, and with a narrow concern about the fortunes of only a single country, firm or business entity, thereby ignoring the cumulative effect brought to bear on the biosphere by the entire production system.

In the 1970s, some environmentalists argued for a policy of "*zero economic growth*" in "affluent" Western societies. However, when a long recession began in that decade, halving economic growth rates, most people became more concerned about mass unemployment. Thus, the proponents of zero growth lost popularity. Nowadays, the popular concept is sustainable economic development or growth. But interpretations of what that means can differ wildly. One difficulty is that predictions of future resource scarcity are usually based on extrapolation from the past, "assuming present trends will continue", but they may not.

## **Capital accumulation and risk**

Most capital accumulation involves risk, because capital is committed to an investment without perfect certainty about future earnings. A capital asset could gain value, but it could also lose value in the future. Owners of capital (investors) therefore typically diversify their investment portfolio, and try to minimise the risks involved in investments by every possible means.

In the course of two centuries of capital accumulation based on industrialisation the intensive economising and exploitation of human labour, and technological innovation,

- the value of the assets that are invested in has become very large
- the markets traded in extend around the globe
- the deregulation of markets has increased the level of market uncertainty
- the volume of speculative capital has grown enormously
- the banking industry dominates the ownership of capital assets.

This has led to an enormous expansion of the insurance industry and of the profession of risk management. As a corollary, this powerfully stimulates the construction of mathematical models which aim to assess how probable it is that particular "risky events" will occur. Some sociologists such as Frank Furedi claim that an exaggerated and unhealthy preoccupation or anxiety about risks has infiltrated the whole of modern society.

Speculation - making money from price differentials or price fluctuations - is *justified* as follows: "The roles of speculators in a market economy are to absorb risk and to add liquidity to the marketplace by risking their own capital for the chance of monetary reward." However, speculation often also occurs with borrowed capital. In this case, capital is borrowed at a low rate of interest, and reinvested at a higher return.

### **Capital accumulation and military wars**

Wars typically causes the diversion, destruction and creation of capital assets as capital assets are both destroyed or consumed and diverted to types of production needed to fight the war. Many assets are wasted and in some few cases created specifically to fight a war. War driven demands may be a powerful stimulus for the accumulation of capital and production capability in limited areas and market expansion outside the immediate theatre of war. Often this has induced laws against perceived and real war profiteering.

War destruction can be illustrated by looking at World War 2. Industrial war damage was heaviest in Japan, where 1/4 of factory buildings and 1/3 of plant & equipment were destroyed; 1/7 of electric power-generating capacity was destroyed and 6/7 of oil refining capacity. The Japanese merchant fleet lost 80% of their ships. In Germany in 1944, when air attacks were heaviest, 6.5% of machine tools were damaged or destroyed, but around 90% were later repaired. About 10% of steel production capacity was lost. In Europe, the United States and the Soviet Union enormous resources were accumulated and ultimately dissipated as planes, ships tanks, etc. were built and then lost or destroyed.

Germany's total war damage was estimated at about 17.5% of the pre-war total capital stock by value, i.e. about 1/6. In the Berlin area alone, there were 8 million refugees lacking basic necessities. In 1945, less than 10% of the railways were still operating. 2395 rail bridges were destroyed and a total of 7500 bridges, 10,000 locomotives and more than 100,000 goods wagons were destroyed. Less than 40% of the remaining locomotives were operational.

However, by the first quarter of 1946 European rail traffic, which was given assistance and preferences (by western appointed military governors) for resources and material as an essential asset, regained its prewar operational level. At the end of the year, 90% of Germany's railway lines were operating again. In retrospect, the rapidity of infrastructure reconstruction appears astonishing.

Initially, in May 1945, newly installed President Harry S. Truman's directive had been that no steps would be taken towards economic rehabilitation of Germany. In

fact, the initial industry plan of 1946 prohibited production in excess of half of the 1938 level; the iron and steel industry was allowed to produce only less than a third of pre-war output. These plans were rapidly revised and better plans were instituted. In 1946, over 10% of Germany's physical capital stock (plant & equipment) was also dismantled and confiscated, most of it going to the USSR. By 1947, industrial production in Germany was at 1/3 of the 1938 level, and industrial investment at about 1/2 the 1938 level.

The first big strike wave in the Ruhr occurred in early 1947 - it was about food rations and housing, but soon there were demands for nationalisation. The US appointed military Governor (Newman) however stated at the time that he had the power to break strikes by withholding food rations. The clear message was: "no work, no eat". As the military controls in Western Germany were nearly all relinquished and the Germans were allowed to rebuild their own economy with Marshal Plan aid things rapidly improved. By 1951, German industrial production had overtaken the prewar level. The Marshall Aid dollars were important, but, after the currency reform (which permitted German capitalists to revalue their assets) and the establishment of a new political system, much more important was the commitment of the USA to *rebuilding* German capitalism and establishing a free market economy and government, rather than keeping Germany in a weak position. Initially, average real wages remained low, lower even than in 1938, until the early 1950s, while profitability was unusually high. So the total investment fund, aided by credits, was also high, resulting in a high rate of capital accumulation which was nearly all reinvested in new construction or new tools. This was called the German economic miracle or "*Wirtschaftswunder*"(Source: Armstrong, Glyn & Harrison 1984).

In the United States in World War II the large investments in industrial plant necessitated by the war brought some advantages; but the costs of dead, waste and debt would have never been under taken by any rational government for the slight advantages.

In modern times, it has often been possible to rebuild physical capital assets destroyed in wars completely within the space of about 10 years, except in cases of severe pollution by chemical warfare or other kinds of irreparable devastation. However, damage to human capital has been much more devastating, in terms of fatalities (in the case of world war 2, about 55 million deaths), permanent physical disability, enduring ethnic hostility and psychological injuries which have effects for at least several generations.

## . Economic determinism

**Economic determinism** is the theory which attributes primacy to the economic structure over politics in the development of human history. It is usually associated with the theories of Karl Marx, although many Marxist thinkers have dismissed plain and unilateral economic determinism as a form of "vulgar Marxism", or "economism", nowhere included in Marx's works.

Economic determinism as understood by Marxism is the positivist belief that economical laws determine the course of history, in the same way that Auguste Comte considered that laws governed society. The law of economic determinism attributed to Marx's historical materialism is simple: self-preservation is the supreme instinct in man, and therefore the whole pattern of human conduct must always have been governed by the fundamental laws governing survival, a dialectical process between man and nature (see co-evolution)<sup>[citation needed]</sup>. This reasoning leads to the conclusion that all elements of historical consequence result from 'economic determinism', or man's effort to survive.

## **Economic determinism's relation to Marxist philosophy**

According to Marx, each social mode of production produces the material conditions of its reproduction, that is, ideology (which gathers all the political, law and cultural spheres). Thus, ideology permits the mode of production to reproduce itself. Furthermore, Marx and Engels are said to have believed<sup>[citation needed]</sup>, should a revolutionary force change the mode of production, the dominant class will immediately set out to create a new society to protect this new economic order. In the modernity of their era, Marx and Engels felt the property class had essentially accomplished the establishment of a new societal and economic order, instinctively creating a society protective of their capitalist interests. They made this statement to the Bourgeoisie in the Communist Manifesto: "Your very ideas are but the outgrowth of conditions of your bourgeois production and bourgeois property, just as your jurisprudence is but the will of your class, made into law for all, a will whose essential character and direction are determined by the economic conditions of the existence of your class."<sup>[1]</sup> From this, it is argued (citation needed) that Marx and Engels did not believe men could arbitrarily choose any one of several forms of society, but only that one which promotes the prevailing mode of production. The very nature of man's materialistic make-up requires him to do this. The young Marx hence criticized man's alienation, a concept which he later replaced by the critique of commodity fetishism. "Vulgar Marxism" has considered that the relation between the economical infrastructure and the ideological superstructure was an uncausal one, and thus believed in economic determinism. This has been criticized by various Marxist theorists, who dismissed it as a form of economism or economic reductionism. They claimed the relationship is much more reciprocal and complex than unilateral determinism would have it.

## **Conclusion**

Many Marxists(citation needed) claim that Marx and Engels viewed this law of 'economic determinism' as the creative force in human progress. Engels stated: "The final causes of all social changes and political revolution are to be sought, not in men's brains, not in man's insight into internal truth and justice... but in the economies of each epoch."<sup>[2]</sup> Therefore, Engels advocated a change in economic structure as the only valid way of improving society and refining the intellectual make-up of humanity.

## **Criticism of the concept**

Other Marxists and Marx-scholars - including György Lukács, Antonio Gramsci, Louis Althusser, Maurice Godelier, Franz Jakubowski, Edward P. Thompson and Michael Lowy - completely reject the interpretation of Marx and Engels as "economic determinists". They claim this idea is based on a poor and selective reading of Marx and Engels' work.

They argue that this interpretation originated in the early years of the Second International and was popularised by Karl Kautsky and Nikolai Bukharin, among many others. They refer to the disclaimers by Friedrich Engels (see historical materialism) to the effect that while Marx and himself had focused a lot on the economic aspects, they were very aware that this did *not* in fact constitute the totality of society or of social life. However, some have viewed such comments as Engels's attempt to extricate himself from an untenable position.

Non-Marxist scholars have also objected that economic determinism is overly generalized, insofar as any serious historical explanation of *economic* realities must always refer to *non-economic* realities. This became obvious when one had to specify exactly what the economic determinism precisely consisted of. In addition, a lot of confusion about "economic determinism" is due to the conflation of the "commercial" with the "economic". For Marx at least, these were very *different* concepts.

The dynamic of history according to Marx was shaped precisely by the clash of those interests (class struggle), and that clash *could not be understood* simply in terms of economic self-interest, because it also involved human needs, customs, traditions, morals and values encompassing a whole way of life. On the other hand, Lenin wrote that "an idea that captures the minds of the masses becomes a material force," meaning that the said needs, customs, traditions, morals and values can be equated to economic forces.

The end result of economic determinism in this view is both economism (a narrow focus on how people earn their livelihood) and economic reductionism (the attempt to reduce a complex social reality to one factor [the economic] such that this one factor *causes* all other aspects of society). This, according to some<sup>[who?]</sup> plays directly into the hands of the business class, and ultimately ends in an *anti-working* class position, whereby the allegiance of the working class is just a "tool" to be used by the political class to modernise an

## Economic development

**economic development** is the increase in the standard of living of a nation's population with sustained growth from a simple, low-income economy to a modern, high-income economy.<sup>[1][2]</sup> Its scope includes the process and policies by which a nation improves the economic, political, and social well-being of its people.<sup>[3]</sup>

## Overview

Gonçalo L Fonesca at the New School for Social Research defines economic development as "the analysis of the economic development of nations."<sup>[4]</sup>

The *University of Iowa's Center for International Finance and Development* states that:

"'Economic development' or 'development' is a term that economists, politicians, and others have used frequently in the 20th century. The concept, however, has been in existence in the West for centuries. Modernization, Westernization, and especially Industrialization are other terms people have used when discussing economic development. Although no one is sure when the concept originated, most people agree that development is closely bound up with the evolution of capitalism and the demise of feudalism."<sup>[5]</sup>

The study of economic development by social scientists encompasses theories of the causes of industrial-economic modernization, plus organizational and related aspects of enterprise development in modern societies. It embraces sociological research on business organization and enterprise development from a historical and comparative perspective; specific processes of the evolution (growth, modernization) of markets and management-employee relations; and culturally related cross-national similarities and differences in patterns of industrial organization in contemporary Western societies. On the subject of the nature and causes of the considerable variations that exist in levels of industrial-economic growth and performance internationally, it seeks answers to such questions as: "Why are levels of direct foreign investment and labour productivity significantly higher in some countries than in others?"<sup>[6]</sup>

### **Economic growth versus economic development**

Mansell and Wehn state that development has been understood since the second World War to involve economic growth, increases in per capita income, and attainment of a standard of living equivalent to that of industrialized countries.<sup>[7][8]</sup>

Economy Development can also be considered as a static theory that documents the state of economy at a certain time. According to Schumpeter (2003)<sup>[9]</sup> the changes in this equilibrium state to document in economic theory can only be caused by intervening factors coming from the outside.

Further, **Economic development** refers to social and technological progress. It implies a change in the way goods and services are produced, not merely an increase in production achieved using the old methods of production on a wider scale. Economic growth implies only an increase in quantitative output; it may or may not involve development. Economic growth is often measured by rate of change of gross domestic product (eg., percent GDP increase per year.)<sup>[10]</sup> Gross domestic product is the aggregate value-added by the economic activity within a country's borders.

Economic development typically involves improvements in a variety of indicators such as literacy rates, life expectancy, and poverty rates. GDP does not take into account important aspects such as leisure time, environmental quality, freedom, or social justice; alternative measures of economic wellbeing have been proposed (more).

Specifically, human development of a country consists of health and education. There is a strong connection between economic growth and human development. Namely, economic growth provides substantial resources to human development and a stronger labour force in return will drive economic growth.

According to Ranis (2000)<sup>[11]</sup>, we view economic growth to human development as a two-way relationship. Moreover, Ranis suggested that the first chain consist of economic growth benefiting human development with GNP. Namely, GNP increases human development by expenditure from families, government and organizations such as NGOs. With the increase in economic growth, families and individuals will likely increase expenditures with the increased in incomes, which leads to increase in human development. Further, with the increased in expenditures, health, education tend to increases in the country and later will contribute to economic growth.

In addition to increasing private incomes, economic growth also generate additional resources that can be used to improve social services (such as healthcare, safe drinking water etc...). By generating additional resources for social services, unequal income distribution will be limited as such social services are distributed equally across each community; benefiting each individual. Thus, increasing living standards for the public.<sup>[12]</sup>

To summarize, as noted in Anand's article (1993)<sup>[13]</sup>, we can view the relationship between human development and economic development in three different explanations. First, increase in average income leading to improved in health and nutrition (known as Capability Expansion through Economic Growth). Second, it is believed that social outcomes can only be improved by reducing income poverty (known as Capability Expansion through Poverty Reduction). Thirdly, (known as Capability Expansion through Social Services), defines the improvement of social outcomes with essential services such as education, health care, and clean drinking water.

### **Intensive versus extensive growth**

A closely related idea is the difference between intensive and extensive economic growth. Extensive growth is growth achieved by using more resources (land, labour and capital). Intensive growth is growth achieved by using a given amount of resources more efficiently (productively). Intensive growth requires development.

### **Models of economic development**

The 3 building blocks of most growth models are: (1) the production function, (2) the saving function, and (3) the labor supply function (related to population growth). Together with a saving function, growth rate equals  $s/\beta$  ( $s$  is the saving rate, and  $\beta$  is the capital-output ratio). Assuming that the capital-output ratio is fixed by technology and does not change in the short run, growth rate is solely determined by the saving rate on the basis of whatever is saved will be invested.



## Harrod-Domar model

The Harrod-Domar model delineates a functional economic relationship in which the growth rate of gross domestic product ( $g$ ) depends positively on the national saving ratio ( $s$ ) and inversely on the national capital/output ratio ( $k$ ) so that it is written as  $g = s / k$ . The equation takes its name from a synthesis of analysis of growth by the British economist Sir Roy F. Harrod and the Polish-American economist Evsey Domar. The Harrod-Domar model in the early postwar times was commonly used by developing countries in economic planning. With a target growth rate, and information on the capital output ratio, the required saving rate can be calculated. It was the best system...

## Exogenous growth model

The exogenous growth model (or neoclassical growth model) of Robert Solow and others places emphasis on the role of technological change. Unlike the Harrod-Domar model, the saving rate will only determine the level of income but not the rate of growth. The sources-of-growth measurement obtained from this model highlights the relative importance of capital accumulation (as in the Harrod-Domar model) and technological change (as in the Neoclassical model) in economic growth. The original Solow (1957) study showed that technological change accounted for almost 90 percent of U.S. economic growth in the late 19th and early 20th centuries. Empirical studies on developing countries have shown different results (see Chen, E.K.Y. 1979 Hyper-growth in Asian Economies).

Also see, Krugman (1994), who maintained that economic growth in East Asia was based on perspiration (use of more inputs) and not on inspiration (innovations) (Krugman, P., 1994 The Myth of Asia's Miracle, Foreign Affairs, 73).

Even so, in our postindustrial economy, economic development, including in emerging countries is now more and more based on innovation and knowledge. Creating business clusters is one of the strategies used. One well known example is Bangalore in India, where the software industry has been encouraged by government support including Software Technology Parks.

However, when looking at the growth rate put forward from the neoclassical growth model, it seems to suggest that countries with same characteristics and technology will eventually converge to the same rate of growth. However, one should know that the knowledge presented in countries that promotes technological advancement is not stationary. Meaning that knowledge are linked to individual and not to the country.

According to Lucas Jr (1988)<sup>[14]</sup> to compensate the movement of knowledge, we should implement factors such as labour factor to predict immigration flow. With labour movement coming into factor, we can then predict the flow of knowledge which can then successfully lead to increase in technology.

## Information-led development

Information-led development (ILD) most commonly refers to a development strategy whereby a developing country makes as a primary economic policy focus the creation and development of a national information technology (IT) sector with the express aim of relying on this sector as an engine of growth. Notable examples of such countries are India and the Philippines.

More recently, a new formulation of ILD has emerged. With origins in community economic development in the United States, the new ILD model describes the use of data to generate actionable information or information solutions to development challenges. Examples of this include the inclusion of non-financial payment obligations in consumer credit files, also known as alternative data, and the use of this information in underwriting, as a means to reduce financial exclusion in the United States, where an estimated 54 million Americans are shut out of mainstream credit access as there is insufficient information about them in their credit files to be scored by a credit scoring model. This variant of ILD was pioneered by PERC, a non-profit policy research organization and development intermediary headquartered in Chapel Hill, North Carolina<sup>[15]</sup>. Other US-based organizations, including Social Compact<sup>[16]</sup> and the Local Initiatives Support Corporation<sup>[17]</sup>, employ variants of ILD, but none has applied this internationally except for PERC.

This development model is gaining traction in emerging markets such as Colombia and South Africa, where the data is being used to reduce financial exclusion and facilitate credit access as a means to build wealth and form assets. It is also attracting increasing attention from development agencies, including USAID, the International Finance Corporation, the World Bank Group, and the Consultative Group to Assist the Poor.

## Measuring Economic Development

### GDP

North America, even though one of the slowest growing continents, has stable growth. Most of the faster growing economies are in the Caribbean.

South America has a Boom and Bust growth with high followed by recession growth, most notable in Brazil, however growth has been stabilizing and the whole continent is growing.

Africa has seen the fastest growing but also the slowest growing/declining. From the oil fields which made Angola the 3rd fastest growing country in the world, to Zimbabwe the slowest growing and declining country in the world. Oil in Africa has created 'wealth spots' where a few countries have exceeded their neighbors in wealth. Out of the 10 fastest growing countries in the world, 3 were African. Some countries have in the past been the fastest growing in the world. Equatorial Guinea reached 75% growth in 2004 because of oil reserves.

Europe has one of the most stable growth rates. After the fall of the Soviet Union, there was a period of economic decline in Eastern Europe over the 1990s, followed by recovery in the 2000s. The region is now experiencing growth, particularly in those countries that have recently joined the European Union. If the Caucasus were included, Europe would be one of the fastest growing continents in the world. Most countries are growing at a medium speed; however, many smaller countries exceed 7% and grow exceptionally faster than their neighbors. Out of the 10 fastest growing countries in the world, only 1 is in Europe.

Overall in the 20th century Asia was seen as the area with most growth; however, in the 21st century, most of this has been dominated by China. Some spots of growth are starting to appear in East and even South Asia. Most nations with high populations have seen high growth especially. Out of the 10 fastest growing countries 3 were directly in Asia, and 3 indirectly or partially.

Meanwhile Oceania has seen moderate growth. The only exceptional growth in Oceania has been on Vanuatu.

Some countries have negative growth, most often due to ongoing wars or hyperinflation. These countries include Palestinean territories, Zimbabwe, Fiji and Chad.

## **Regional policy**

In its broadest sense, policies of economic development encompass three major areas:

- Governments undertaking to meet broad economic objectives such as price stability, high employment, and sustainable growth. Such efforts include monetary and fiscal policies, regulation of financial institutions, trade, and tax policies.
- Programs that provide infrastructure and services such as highways, parks, affordable housing, crime prevention, and K-12 education.
- Job creation and retention through specific efforts in business finance, marketing, neighborhood development, small business development, business retention and expansion, technology transfer, and real estate development. This third category is a primary focus of economic development professionals.

## **Economic developers**

Economic development, which is thus essentially economics on a social level, has evolved into a professional industry of highly specialized practitioners. The practitioners have two key roles: one is to provide leadership in policy-making, and the other is to administer policy, programs, and projects. Economic development practitioners generally work in public offices on the state, regional, or municipal level, or in public-private partnerships organizations that may be partially funded by local, regional, state, or federal tax money. These economic development organizations (EDOs) function as individual entities and in some cases as

departments of local governments. Their role is to seek out new economic opportunities and retain their existing business wealth.

There are numerous other organizations whose primary function is not economic development work in partnership with economic developers. They include the news media, foundations, utilities, schools, health care providers, faith-based organizations, and colleges, universities, and other education or research institutions.

With more than 20,000 professional economic developers employed world wide in this highly specialized industry, the International Economic Development Council [IEDC] [3] headquartered in Washington, D.C. is a non-profit organization dedicated to helping economic developers do their job more effectively and raising the profile of the profession. With over 4,500 members across the US and internationally, serving exclusively the economic development community. Membership represents the entire range of the profession ranging from regional, state, local, rural, urban, and international economic development organizations, as well as chambers of commerce, technology development agencies, utility companies, educational institutions, consultants and redevelopment authorities. Many individual states also have associations comprising economic development professionals and they work closely with IEDC.

There is intense competition between communities, states, and nations for new economic development projects in today's globalized world, and the struggle to attract and retain business is further intensified by the use of many variations of economic incentives to the potential business such as; tax incentives, help with investment capital, donated land and many others. IEDC places significant attention on the various activities undertaken by economic development organizations to help them compete and sustain vibrant communities.

Additionally, the use of community profiling tools and database templates to measure community assets versus other communities is also an important aspect of economic development. Job creation, economic output, and increase in taxable basis are the most common measurement tools. When considering measurement, too much emphasis has been placed on economic developers for "not creating jobs." However, the reality is that economic developers do not typically create jobs, but facilitate the process for existing businesses and start-ups to do so. Therefore, the economic developer must make sure that there are sufficient economic development programs in place to assist the businesses achieve their goals. Those types of programs are usually policy-created and can be local, regional, statewide and national in nature.

## **Export-led growth**

**Export-led growth** is an economic strategy used by some developing countries. This strategy seeks to find a niche in the world economy for a certain type of export. Industries producing this export may receive governmental subsidies and better access to the local markets. By implementing this strategy, countries hope to gain

enough hard currency to import commodities manufactured more cheaply somewhere else.<sup>[1]</sup>

## Origins

From the Great Depression to the years after WWII, under-developed and developing countries started to have a hard time economically. During this time, many foreign markets were closed and the danger of trading and shipping in war-time waters drove many of these countries to look for another solution to development. The initial solution to this dilemma was called import substitution industrialization. Both Latin American and Asian countries used this strategy at first. However, during the 1950s and 1960's the Asian countries, like Taiwan and South Korea, started focusing their development outward, resulting in an export-led growth strategy. Many of the Latin American countries continued with import substitution industrialization, just expanding its scope. Some have pointed out that because of the success of the Asian countries, especially Taiwan and South Korea, export-led growth should be considered the best strategy to promote development.<sup>[2]</sup>

## Importance

Export-led growth is important for mainly two reasons. The first is that export-led growth can create profit, allowing a country to balance their finances, as well as surpass their debts as long as the facilities and materials for the export exist. The second, much more debatable reason is that increased export growth can trigger greater productivity, thus creating more exports in an upward spiral cycle.<sup>[3]</sup>

The importance of this concept can be shown in the model below from J.S.L McCombie and A.P. Thirwall's *Economic Growth and the Balance-of-Payments Constraint*.

$y_B$  is the balance of payments constraint, meaning the relationship between expenditures and profits

$y_A$  is the actual growth capacity of a country, which can never be more than the current capacity

$y_C$  is the current capacity of growth, or how well the country is producing at that moment

## Types of Exports

There are essentially two types of exports used in this context: manufactured goods and raw materials.

## Manufactured Goods

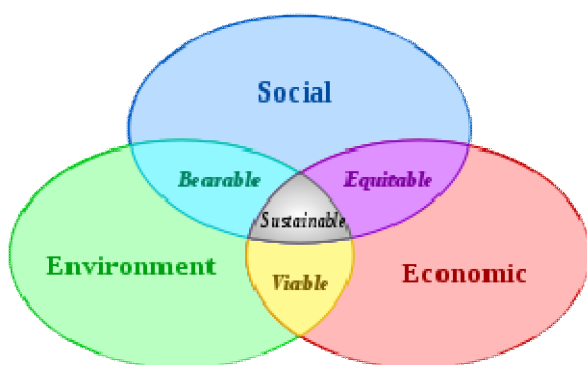
The use of manufactured goods as exports is the most common way to achieve export-led growth. However, many times these industries are competing against industrialized countries' industries, which often include better technology, better

educated workers, and more capital to start with. Therefore, this strategy for export-led growth must be well thought out and planned. Not only must a country find a certain export that they manufacture well, that industry must also be able to make it in the world market competing with industrialized industries.<sup>[1]</sup>

## Raw Materials

Using raw materials as an export is another option available to countries. However, this strategy has a considerable amount of risk compared to manufactured goods. The terms of trade greatly affect this plan. Over time, a country would have to export more and more of the raw materials to import the same amount of commodities, making the trade profits very difficult to come by.<sup>[1]</sup>

## Sustainable development



Scheme of sustainable development: at the confluence of three constituent parts.

**Sustainable development** is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. The term was used by the Brundtland Commission which coined what has become the most often-quoted definition of sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>[2][3]</sup>

Sustainable development ties together concern for the carrying capacity of natural systems with the social challenges facing humanity. As early as the 1970s "sustainability" was employed to describe an economy "in equilibrium with basic ecological support systems."<sup>[4]</sup> Ecologists have pointed to *The Limits to Growth*,<sup>[citation needed]</sup> and presented the alternative of a "steady state economy"<sup>[5]</sup> in order to address environmental concerns.

The field of sustainable development can be conceptually broken into three constituent parts: environmental sustainability, economic sustainability and sociopolitical sustainability.

## Scope and definitions

The concept has included notions of weak sustainability, strong sustainability and deep ecology. Sustainable development does not focus solely on environmental issues.

In 1987, the United Nations released the Brundtland Report, which defines sustainable development as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs.'<sup>[6]</sup>

The United Nations 2005 World Summit Outcome Document refers to the "interdependent and mutually reinforcing pillars" of sustainable development as economic development, social development, and environmental protection.<sup>[7]</sup>

Indigenous people have argued, through various international forums such as the United Nations Permanent Forum on Indigenous Issues and the Convention on Biological Diversity, that there are *four* pillars of sustainable development, the fourth being cultural. *The Universal Declaration on Cultural Diversity* (UNESCO, 2001) further elaborates the concept by stating that "...cultural diversity is as necessary for humankind as biodiversity is for nature"; it becomes "one of the roots of development understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence". In this vision, cultural diversity is the fourth policy area of sustainable development.

Economic Sustainability: Agenda 21 clearly identified information, integration, and participation as key building blocks to help countries achieve development that recognises these interdependent pillars. It emphasises that in sustainable development everyone is a user and provider of information. It stresses the need to change from old sector-centred ways of doing business to new approaches that involve cross-sectoral co-ordination and the integration of environmental and social concerns into all development processes. Furthermore, Agenda 21 emphasises that broad public participation in decision making is a fundamental prerequisite for achieving sustainable development.<sup>[8]</sup>

According to Hasna, sustainability is a process which tells of a development of all aspects of human life affecting sustenance. It means resolving the conflict between the various competing goals, and involves the simultaneous pursuit of economic prosperity, environmental quality and social equity famously known as three dimensions (triple bottom line) with is the resultant vector being technology, hence it is a continually evolving process; the 'journey' (the process of achieving sustainability) is of course vitally important, but only as a means of getting to the destination (the desired future state). However, the 'destination' of sustainability is not a fixed place in the normal sense that we understand destination. Instead, it is a set of wishful characteristics of a future system.<sup>[9]</sup>

Green development is generally differentiated from sustainable development in that Green development prioritizes what its proponents consider to be environmental sustainability over economic and cultural considerations. Proponents of Sustainable Development argue that it provides a context in which to improve overall sustainability where cutting edge Green development is unattainable. For example, a cutting edge treatment plant with extremely high maintenance costs may not be

sustainable in regions of the world with fewer financial resources. An environmentally ideal plant that is shut down due to bankruptcy is obviously less sustainable than one that is maintainable by the community, even if it is somewhat less effective from an environmental standpoint.

Some research activities start from this definition to argue that the environment is a combination of nature and culture. The Network of Excellence "Sustainable Development in a Diverse World",<sup>[10]</sup> sponsored by the European Union, integrates multidisciplinary capacities and interprets cultural diversity as a key element of a new strategy for sustainable development.

Still other researchers view environmental and social challenges as opportunities for development action. This is particularly true in the concept of sustainable enterprise that frames these global needs as opportunities for private enterprise to provide innovative and entrepreneurial solutions. This view is now being taught at many business schools including the Center for Sustainable Global Enterprise at Cornell University and the Erb Institute for Global Sustainable Enterprise at the University of Michigan.

The United Nations Division for Sustainable Development lists the following areas as coming within the scope of sustainable development:<sup>[11]</sup>

Sustainable development is an eclectic concept, as a wide array of views fall under its umbrella. The concept has included notions of weak sustainability, strong sustainability and deep ecology. Different conceptions also reveal a strong tension between ecocentrism and anthropocentrism. Many definitions and images (Visualizing Sustainability) of sustainable development coexist. Broadly defined, the sustainable development mantra enjoins current generations to take a systems approach to growth and development and to manage natural, produced, and social capital for the welfare of their own and future generations.

During the last ten years, different organizations have tried to measure and monitor the proximity to what they consider sustainability by implementing what has been called sustainability metrics and indices<sup>[12]</sup>.

Sustainable development is said to set limits on the developing world. While current first world countries polluted significantly during their development, the same countries encourage third world countries to reduce pollution, which sometimes impedes growth. Some consider that the implementation of sustainable development would mean a reversion to pre-modern lifestyles.<sup>[13]</sup>

Others have criticized the overuse of the term:

"[The] word sustainable has been used in too many situations today, and ecological sustainability is one of those terms that confuse a lot of people. You hear about sustainable development, sustainable growth, sustainable economies, sustainable societies, sustainable agriculture. Everything is sustainable (Temple, 1992)."<sup>[13]</sup>



## Environmental sustainability

Environmental sustainability is the process of making sure current processes of interaction with the environment are pursued with the idea of keeping the environment as pristine as naturally possible based on ideal-seeking behavior.

An "unsustainable situation" occurs when natural capital (the sum total of nature's resources) is used up faster than it can be replenished. Sustainability requires that human activity only uses nature's resources at a rate at which they can be replenished naturally. Inherently the concept of sustainable development is intertwined with the concept of carrying capacity. Theoretically, the long-term result of environmental degradation is the inability to sustain human life. Such degradation on a global scale could imply extinction for humanity.

Consumption of renewable resources	State of environment	Sustainability
More than nature's ability to replenish	Environmental degradation	Not sustainable
Equal to nature's ability to replenish	Environmental equilibrium	Steady state economy
Less than nature's ability to replenish	Environmental renewal	Environmentally sustainable

## The notion of capital in sustainable development

The sustainable development debate is based on the assumption that societies need to manage three types of capital (economic, social, and natural), which may be non-substitutable and whose consumption might be irreversible.<sup>[14]</sup> Daly (1991),<sup>[15]</sup> for example, points to the fact that natural capital can not necessarily be substituted by economic capital. While it is possible that we can find ways to replace some natural resources, it is much more unlikely that they will ever be able to replace eco-system services, such as the protection provided by the ozone layer, or the climate stabilizing function of the Amazonian forest. In fact natural capital, social capital and economic capital are often complementarities. A further obstacle to substitutability lies also in the multi-functionality of many natural resources. Forests, for example, do not only provide the raw material for paper (which can be substituted quite easily), but they also maintain biodiversity, regulate water flow, and absorb CO<sub>2</sub>. Another problem of natural and social capital deterioration lies in their partial irreversibility. The loss in biodiversity, for example, is often definite. The same can be true for cultural diversity. For example with globalisation advancing

quickly the number of indigenous languages is dropping at alarming rates. Moreover, the depletion of natural and social capital may have non-linear consequences. Consumption of natural and social capital may have no observable impact until a certain threshold is reached. A lake can, for example, absorb nutrients for a long time while actually increasing its productivity. However, once a certain level of algae is reached lack of oxygen causes the lake's ecosystem to break down all of a sudden.

## **Market failure**

If the degradation of natural and social capital has such important consequence the question arises why action is not taken more systematically to alleviate it. Cohen and Winn (2007)<sup>[16]</sup> point to four types of market failure as possible explanations: First, while the benefits of natural or social capital depletion can usually be privatized the costs are often externalized (i.e. they are borne not by the party responsible but by society in general). Second, natural capital is often undervalued by society since we are not fully aware of the real cost of the depletion of natural capital. Information asymmetry is a third reason—often the link between cause and effect is obscured, making it difficult for actors to make informed choices. Cohen and Winn close with the realization that contrary to economic theory many firms are not perfect optimizers. They postulate that firms often do not optimize resource allocation because they are caught in a "business as usual" mentality.

## **The business case for sustainable development**

The most broadly accepted criterion for corporate sustainability constitutes a firm's efficient use of natural capital. This eco-efficiency is usually calculated as the economic value added by a firm in relation to its aggregated ecological impact.<sup>[17]</sup> This idea has been popularised by the World Business Council for Sustainable Development (WBCSD) under the following definition: "Eco-efficiency is achieved by the delivery of competitively-priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life-cycle to a level at least in line with the earth's carrying capacity." (DeSimone and Popoff, 1997: 47)<sup>[18]</sup>

Similar to the eco-efficiency concept but so far less explored is the second criterion for corporate sustainability. Socio-efficiency<sup>[19]</sup> describes the relation between a firm's value added and its social impact. Whereas, it can be assumed that most corporate impacts on the environment are negative (apart from rare exceptions such as the planting of trees) this is not true for social impacts. These can be either positive (e.g. corporate giving, creation of employment) or negative (e.g. work accidents, mobbing of employees, human rights abuses). Depending on the type of impact socio-efficiency thus either tries to minimize negative social impacts (i.e. accidents per value added) or maximise positive social impacts (i.e. donations per value added) in relation to the value added.

Both eco-efficiency and socio-efficiency are concerned primarily with increasing economic sustainability. In this process they instrumentalize both natural and social capital aiming to benefit from win-win situations. However, as Dyllick and Hockerts<sup>[19]</sup> point out the business case alone will not be sufficient to realise

sustainable development. They point towards eco-effectiveness, socio-effectiveness, sufficiency, and eco-equity as four criteria that need to be met if sustainable development is to be reached.

## **Critique of the concept of sustainable development**

The concept of " Sustainable Development " raises several critiques at different levels.

### **Purpose**

Various writers have commented on the population control agenda that seems to underlie the concept of sustainable development. Maria Sophia Aguirre writes:<sup>[20]</sup>

"Sustainable development is a policy approach that has gained quite a lot of popularity in recent years, especially in international circles. By attaching a specific interpretation to sustainability, population control policies have become the overriding approach to development, thus becoming the primary tool used to "promote" economic development in developing countries and to protect the environment."

Mary Jo Anderson suggests that the real purpose of sustainable development is to contain and limit economic development in developing countries, and in so doing control population growth.<sup>[21]</sup> It is suggested that this is the reason the main focus of most programs is still on low-income agriculture. Joan Veon, a businesswoman and international reporter, who covered 64 global meetings on sustainable development posits that:<sup>[22]</sup>

"Sustainable development has continued to evolve as that of protecting the world's resources while its true agenda is to control the world's resources. It should be noted that Agenda 21 sets up the global infrastructure needed to manage, count, and control all of the world's assets."

### **Consequences**

John Baden<sup>[23]</sup> reckons that the notion of sustainable development is dangerous because the consequences are proceedings with unknown effects or potentially dangerous. He writes: "In economy like in ecology, the interdependence rules applies. Isolated actions are impossible. A policy which is not enough carefully thought will carry along various perverse and adverse effects for the ecology as much as for the economy. Many suggestions to save our environment and to promote a model of 'sustainable development' risk indeed leading to reverse effects."<sup>[24]</sup> Moreover, he evokes the bounds of the public action which are underlined by the public choice theory: quest by the politics of their own interests, lobby pressure, partial disclosure etc. He develops his critique by noting the vagueness of the expression, which can cover anything : It is a gateway to interventionist proceedings which can be against the principle of freedom and without proven efficacy. Against this notion, he is a proponent of private property to impel the producers and the consumers to save the natural resources. According to Baden, "the improvement of environment quality

depends on the market economy and the existence of legitimate and protected property rights." They enable the effective practice of personal responsibility and the development of mechanisms to protect the environment. The State can in this context "create conditions which encourage the people to save the environment."<sup>[25]</sup>

### **Vagueness of the term**

The term of "sustainable development" is criticized because of its vagueness. For example, Jean-Marc Jancovici<sup>[26]</sup> or the philosopher Luc Ferry<sup>[27]</sup> express this view. The latter writes about sustainable development: "I know that this term is obligatory, but I find it also absurd, or rather so vague that it says nothing." Luc Ferry adds that the term is trivial by a proof by contradiction: "who would like to be a proponent of an "untenable development! Of course no one! [...] The term is more charming than meaningful. [...] Everything must be done so that it does not turn into a Russian-type administrative planning with ill effects."

### **Basis**

Sylvie Brunel, French geographer and specialist of the Third World, develops in *A qui profite le développement durable* (Who benefits from sustainable development?) (2008) a critique of the basis of sustainable development, with its binary vision of the world, can be compared to the Christian vision of Good and Evil, a idealized nature where the human being is an animal like the others or even an alien. Nature – as Rousseau thought – is better than the human being. It is a parasite, harmful for the nature. But the human is the one who protects the biodiversity, where normally only the strong survive.<sup>[28]</sup>

Moreover, she thinks that the ideas of sustainable development can hide a will to protectionism from the developed country to impede the development of the other countries. For Sylvie Brunel, the sustainable development serves as a pretext for the protectionism and "I have the feeling about sustainable development that it is perfectly helping out the capitalism".<sup>[28]</sup>

### **"De-growth"**

The proponents of the de-growth reckon that the term of sustainable development is an oxymoron. According to them, on a planet where 20% of the population consumes 80% of the natural resources, a sustainable development cannot be possible for this 20%: "According to the origin of the concept of sustainable development , a development which meets the needs of the present without compromising the ability of future generations to meet their own needs, the right term for the developed countries should be a sustainable de-growth".<sup>[29]</sup>

### **Sustainable development in economics**

The Venn diagram of sustainable development shown above has many versions,<sup>[30]</sup> but was first used by economist Edward Barbier (1987)<sup>[31]</sup>. However, Pearce, Barbier and Markandya (1989)<sup>[32]</sup> criticized the Venn approach due to the intractability of operationalizing separate indices of economic, environmental, and social

sustainability and somehow combining them. They also noted that the Venn approach was inconsistent with the Brundtland Commission Report, which emphasized the interlinkages between economic development, environmental degradation, and population pressure instead of three objectives. Economists have since focused on viewing the economy and the environment as a single interlinked system with a unified valuation methodology (Hamilton 1999<sup>[33]</sup>, Dasgupta 2007<sup>[34]</sup>). Intergenerational equity can be incorporated into this approach, as has become common in economic valuations of climate change economics (Heal, 2009)<sup>[35]</sup>. Ruling out discrimination against future generations and allowing for the possibility of renewable alternatives to petro-chemicals and other non-renewable resources, efficient policies are compatible with increasing human welfare, eventually reaching a golden-rule steady state (Ayong le Kama, 2001<sup>[36]</sup> and Endress et al. 2005<sup>[37]</sup>). Thus the three pillars of sustainable development are interlinkages, intergenerational equity, and dynamic efficiency (Stavins, et al 2003).<sup>[38]</sup>

Arrow et al. (2004)<sup>[39]</sup> and other economists (e.g. Asheim, 1999<sup>[40]</sup> and Pezzey, 1989<sup>[41]</sup> and 1997<sup>[42]</sup>) have advocated a form of the weak criterion for sustainable development – the requirement that the wealth of a society, including human-capital, knowledge-capital and natural-capital (as well as produced capital) not decline over time. Others, including Barbier 2007,<sup>[43]</sup> continue to contend that strong sustainability – non-depletion of essential forms of natural capital – may be appropriate.

able living within the carrying capacity of supporting eco-systems".<sup>[22]</sup>

The Earth Charter goes beyond defining what sustainability is, and seeks to establish the values and direction needed to achieve it: "We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations."<sup>[23]</sup>

## **Principles and concepts**

Sustainability science and environmental science<sup>[44]</sup> form the basis for much of the philosophical and analytic framework of sustainability.<sup>[45]</sup> Quantitative data is collected through sustainability measurement and this data is then used in governance for sustainability.<sup>[46]</sup>

## **Global principles**

At the global level there are several key principles that underpin global sustainability:

- *Intergenerational equity* - providing future generations with the same environmental potential as presently exists

- *Decoupling economic growth from environmental degradation* - managing economic growth to be less resource intensive and less polluting
- *Integration of all pillars* - integrating environmental, social and economic sectors when developing sustainability policies
- *Ensuring environmental adaptability and resilience* - maintaining and enhancing the adaptive capacity of the environmental system
- *Preventing irreversible long-term damage to ecosystems and human health*
- *Ensuring distributional equity* - avoiding unfair or high environmental costs on vulnerable populations
- *Accepting global responsibility* - assuming responsibility for environmental effects that occur outside areas of jurisdiction
- *Education and grassroots involvement* - people and communities investigating problems and developing new solutions<sup>[49]</sup>

## Population

### Population control

According to the 2008 Revision of the official United Nations population estimates and projections, the world population is projected to reach 7 billion early in 2012, up from the current 6.9 billion (May 2009), to exceed 9 billion people by 2050. Most of the increase will be in developing countries whose population is projected to rise from 5.6 billion in 2009 to 7.9 billion in 2050. This increase will be distributed among the population aged 15–59 (1.2 billion) and 60 or over (1.1 billion) because the number of children under age 15 in developing countries will decrease. In contrast, the population of the more developed regions is expected to undergo only slight increase from 1.23 billion to 1.28 billion, and this would have declined to 1.15 billion but for a projected net migration from developing to developed countries, which is expected to average 2.4 million persons annually from 2009 to 2050.<sup>[53]</sup> Long-term estimates of global population suggest a peak at around 2070 of nine to ten billion people, and then a slow decrease to 8.4 billion by 2100.<sup>[54]</sup>

Emerging economies like those of China and India aspire to the living standards of the Western world as does the non-industrialized world in general. It is the combination of population increase in the developing world and unsustainable consumption levels in the developed world that poses a stark challenge to sustainability.<sup>[55]</sup>

### Direct and indirect environmental impacts

At a fundamental level energy flow and biogeochemical cycling set an upper limit on the number and mass of organisms in any ecosystem.<sup>[56]</sup> Human impacts on the Earth are demonstrated through detrimental changes in the global biogeochemical cycles of chemicals that are critical to life, most notably those of water, oxygen, carbon, nitrogen and phosphorus.<sup>[57]</sup>

### Environmental dimension

Healthy ecosystems provide vital goods and services to humans and other organisms. There are two major ways of reducing negative human impact and enhancing ecosystem services:

a) Environmental management. This direct approach is based largely on information gained from earth science, environmental science and conservation biology.

However, this is management at the end of a long series of indirect causal factors that are initiated by human consumption, so a second approach is through demand management of human resource use.

b) Management of human consumption of resources, an indirect approach based largely on information gained from economics. Herman Daly has suggested three broad criteria for ecological sustainability: renewable resources should provide a sustainable yield (the rate of harvest should not exceed the rate of regeneration); for non-renewable resources there should be equivalent development of renewable substitutes; waste generation should not exceed the assimilative capacity of the environment.<sup>[68]</sup>

## **Environmental management**

### *Environmental management and Natural resource management*

At the global scale and in the broadest sense environmental management involves the oceans, freshwater systems, land and atmosphere, but following the sustainability principle of scale it can be equally applied to any ecosystem from a tropical rainforest to a home garden.<sup>[69][70]</sup>

### **Atmosphere** *Earth's atmosphere and Climate change*

In March 2009 at a meeting of the Copenhagen Climate Council 2,500 climate experts from 80 countries issued a keynote statement that there is now "no excuse" for failing to act on global warming and that without strong carbon reduction targets "abrupt or irreversible" shifts in climate may occur that "will be very difficult for contemporary societies to cope with".<sup>[71][72]</sup> Management of the global atmosphere now involves assessment of all aspects of the carbon cycle to identify opportunities to address human-induced climate change and this has become a major focus of scientific research because of the potential catastrophic effects on biodiversity and human communities (see Energy below).

Other human impacts on the atmosphere include the air pollution in cities, the pollutants including toxic chemicals like nitrogen oxides, sulphur oxides, volatile organic compounds and particulate matter that produce photochemical smog and acid rain, and the chlorofluorocarbons that degrade the ozone layer. Anthropogenic particulates such as sulphate aerosols in the atmosphere reduce the direct irradiance and reflectance (albedo) of the Earth's surface. Known as global dimming the decrease is estimated to have been about 4% between 1960 and 1990 although the trend has subsequently reversed. Global dimming may have disturbed the global

water cycle by reducing evaporation and rainfall in some areas. It also creates a cooling effect and this may have partially masked the effect of greenhouse gases on global warming.<sup>[73]</sup>

Loss of biodiversity stems largely from the habitat loss and fragmentation produced by the human appropriation of land for development, forestry and agriculture as natural capital is progressively converted to man-made capital. Land use change is fundamental to the operations of the biosphere because alterations in the relative proportions of land dedicated to urbanisation, agriculture, forest, woodland, grassland and pasture have a marked effect on the global water, carbon and nitrogen biogeochemical cycles and this can impact negatively on both natural and human systems.<sup>[80]</sup> At the local human scale major sustainability benefits accrue from the pursuit of green cities and sustainable parks and gardens.<sup>[81][82]</sup>

## **Cultivated land**

Feeding more than six billion human bodies takes a heavy toll on the Earth's resources. This begins with the appropriation of about 38% of the Earth's land surface<sup>[89]</sup> and about 20% of its net primary productivity.<sup>[90]</sup> Added to this are the resource-hungry activities of industrial agribusiness – everything from the crop need for irrigation water, synthetic fertilizers and pesticides to the resource costs of food packaging, transport (now a major part of global trade) and retail. Food is essential to life. But the list of environmental costs of food production is a long one: topsoil depletion, erosion and conversion to desert from constant tillage of annual crops; overgrazing; salinization; sodification; waterlogging; high levels of fossil fuel use; reliance on inorganic fertilisers and synthetic organic pesticides; reductions in genetic diversity by the mass use of monocultures; water resource depletion; pollution of waterbodies by run-off and groundwater contamination; social problems including the decline of family farms and weakening of rural communities.<sup>[91]</sup>

All of these environmental problems associated with industrial agriculture and agribusiness are now being addressed through such movements as sustainable agriculture, organic farming and more sustainable business practices.<sup>[92]</sup>

**Extinctions** Although biodiversity loss can be monitored simply as loss of species, effective conservation demands the protection of species within their natural habitats and ecosystems. Following human migration and population growth, species extinctions have progressively increased to a rate unprecedented since the Cretaceous–Tertiary extinction event. Known as the Holocene extinction event this current human-induced extinction of species ranks as one of the world's six mass extinction events. Some scientific estimates indicate that up to half of presently existing species may become extinct by 2100.<sup>[93][94]</sup> Current extinction rates are 100 to 1000 times their prehuman levels with more than 10% birds and mammals threatened, about 8% of plants, 5% of fish and more than 20% of freshwater species.<sup>[95]</sup>

The 2008 IUCN Red List warns that long-term droughts and extreme weather put additional stress on key habitats and, for example, lists 1,226 bird species as threatened with extinction, which is one-in-eight of all bird species.<sup>[96][97]</sup> The Red



List Index also identifies 44 tree species in Central Asia as under threat of extinction due to over-exploitation and human development and threatening the region's forests which are home to more than 300 wild ancestors of modern domesticated fruit and nut cultivars.<sup>[98]</sup>

**Biological invasions** In many parts of the industrial world land clearing for agriculture has diminished and here the greatest threat to biodiversity, after climate change, has become the destructive effect of invasive species.<sup>[99]</sup> Increasingly efficient global transport has facilitated the spread of organisms across the planet. The potential danger of this aspect of globalization is starkly illustrated through the spread of human diseases like HIV AIDS, mad cow disease, bird flu and swine flu, but invasive plants and animals are also having a devastating impact on native biodiversity. Non-indigenous organisms can quickly occupy disturbed land and natural areas where, in the absence of their natural predators, they are able to thrive.<sup>[100]</sup> At the global scale this issue is being addressed through the Global Invasive Species Information Network but there is improved international biosecurity legislation to minimise the transmission of pathogens and invasive organisms. Also, through CITES legislation there is control the trade in rare and threatened species. Increasingly at the local level public awareness programs are alerting communities, gardeners, the nursery industry, collectors, and the pet and aquarium industries, to the harmful effects of potentially invasive species.<sup>[101]</sup>

### **Management of human consumption** *Consumption (economics)*

The underlying driver of direct human impacts on the environment is human consumption.<sup>[102]</sup> This impact is reduced by not only consuming less but by also making the full cycle of production, use and disposal more sustainable. Consumption of goods and services can be analysed and managed at all scales through the chain of consumption, starting with the effects of individual lifestyle choices and spending patterns, through to the resource demands of specific goods and services, the impacts of economic sectors, through national economies to the global economy.<sup>[103]</sup> Analysis of consumption patterns relates resource use to the environmental, social and economic impacts at the scale or context under investigation. The ideas of embodied resource use (the total resources needed to produce a product or service), resource intensity (the resources needed for each dollar spent on a good or service), and resource productivity (the amount of good or service produced for a given input of resource) are important tools for understanding the impacts of consumption with simple key resource categories indicating human needs being food, energy, materials and water.

**Energy** The Sun's energy, stored by plants (primary producers) during photosynthesis, passes through the food chain to other organisms to ultimately power all living processes. Since the industrial revolution the concentrated energy of the Sun stored in fossilized plants as fossil fuels has been a major driver of technology which, in turn, has been the source of both economic and political power. In 2007 climate scientists of the IPCC concluded that there was at least a 90% probability that atmospheric increase in CO<sub>2</sub> was human-induced, mostly as a result of fossil fuel emissions but, to a lesser extent from changes in land use. Stabilizing the world's climate will require high income countries to reduce their emissions by

60-90% over 2006 levels by 2050 which should hold CO<sub>2</sub> levels at 450-650 ppm from current levels of about 380 ppm. Above this level and temperatures could rise by more than 2 °C (36 °F) to produce "catastrophic" climate change.<sup>[104][105]</sup> Reduction of current CO<sub>2</sub> levels must be achieved against a background of global population increase and developing countries aspiring to energy-intensive high consumption Western lifestyles.<sup>[106]</sup>

Reducing greenhouse emissions, referred to as decarbonization, is being tackled at all scales, ranging from tracking the passage of carbon through the carbon cycle<sup>[107]</sup> to the exploration of renewable energies, developing less carbon-hungry technology and transport systems and attempts by individuals to lead carbon neutral lifestyles by monitoring the fossil fuel use embodied in all the goods and services they use.<sup>[108]</sup>

## **Water** *Water resources*

Water security and food security are inextricably linked. In the decade 1951-60 human water withdrawals were four times greater than the previous decade. This rapid increase resulted from scientific and technological developments impacting through the economy - especially the increase in irrigated land, growth in industrial and power sectors, and intensive dam construction on all continents. This altered the water cycle of rivers and lakes, affected their water quality and had a significant impact on the global water cycle.<sup>[109]</sup> Currently towards 35% of human water use is unsustainable, drawing on diminishing aquifers and reducing the flows of major rivers: this percentage is likely to increase if climate change worsens, populations increase, aquifers become progressively depleted and supplies become polluted and unsanitary.<sup>[110]</sup> From 1961 to 2001 water demand doubled - agricultural use increased by 75%, industrial use by more than 200%, and domestic use more than 400%.<sup>[111]</sup> Humans currently use 40-50% of the globally available freshwater in the approximate proportion of 70% for agriculture, 22% for industry, and 8% for domestic purposes and the total volume is progressively increasing.<sup>[109]</sup>

Water efficiency is being improved on a global scale by increased demand management, improved infrastructure, improved water productivity of agriculture, minimising the water intensity (embodied water) of goods and services, addressing shortages in the non-industrialised world, concentrating food production in areas of high productivity; and planning for climate change. At the local level people are becoming more water-self-sufficient by harvesting rainwater and reducing use of mains water

## **Food**

The American Public Health Association (APHA) defines a "sustainable food system"<sup>[113][114]</sup> as "one that provides healthy food to meet current food needs while maintaining healthy ecosystems that can also provide food for generations to come with minimal negative impact to the environment. A sustainable food system also encourages local production and distribution infrastructures and makes nutritious food available, accessible, and affordable to all. Further, it is humane and just, protecting farmers and other workers, consumers, and communities."<sup>[115]</sup> Concerns about the environmental impacts of agribusiness and the stark contrast between the

obesity problems of the Western world and the poverty and food insecurity of the developing world have generated a strong movement towards healthy, sustainable eating as a major component of overall ethical consumerism.<sup>[116]</sup> The environmental effects of different dietary patterns depend on many factors, including the proportion of animal and plant foods consumed and the method of food production.<sup>[117][118][119][120]</sup> The World Health Organization has published a *Global Strategy on Diet, Physical Activity and Health* which was endorsed by the May 2004 World Health Assembly. It recommends the Mediterranean diet which is associated with health and longevity and is low in meat, rich in fruits and vegetables, low in added sugar and limited salt, and low in saturated fatty acids; the traditional source of fat in the Mediterranean is olive oil, rich in monounsaturated fat. The healthy rice-based Japanese diet is also high in carbohydrates and low in fat. Both diets are low in meat and saturated fats and high in legumes and other vegetables; they are associated with a low incidence of ailments and low environmental impact.<sup>[121]</sup>

At the global level the environmental impact of agribusiness is being addressed through sustainable agriculture and organic farming. At the local level there are various movements working towards local food production, more productive use of urban wastelands and domestic gardens including permaculture, urban horticulture, local food, slow food, sustainable gardening, and organic gardening.<sup>[122][123]</sup>

## **Materials, toxic substances, waste**

As global population and affluence has increased, so has the use of various materials increased in volume, diversity and distance transported. Included here are raw materials, minerals, synthetic chemicals (including hazardous substances), manufactured products, food, living organisms and waste.<sup>[124]</sup>

### *Materials : Dematerialization*

Sustainable use of materials has targeted the idea of dematerialization, converting the linear path of materials (extraction, use, disposal in landfill) to a circular material flow that reuses materials as much as possible, much like the cycling and reuse of waste in nature.<sup>[125]</sup> This approach is supported by product stewardship and the increasing use of material flow analysis at all levels, especially individual countries and the global economy.<sup>[126]</sup>

### *Toxic substances Dangerous goods*

Synthetic chemical production has escalated following the stimulus it received during the second World War. Chemical production includes everything from herbicides, pesticides and fertilizers to domestic chemicals and hazardous substances.<sup>[127]</sup> Apart from the build-up of greenhouse gas emissions in the atmosphere, chemicals of particular concern include: heavy metals, nuclear waste, chlorofluorocarbons, persistent organic pollutants and all harmful chemicals capable of bioaccumulation. Although most synthetic chemicals are harmless there needs to be rigorous testing of new chemicals, in all countries, for adverse environmental and health effects. International legislation has been established to deal with the global distribution and management of dangerous goods.

## *Waste management*

Every economic activity produces material that can be classified as waste. The average human uses 45-85 tonnes of materials each year.<sup>[124]</sup> To reduce waste industry, business and government are now mimicking nature by turning the waste produced by industrial metabolism into resource. Dematerialization is being encouraged through the ideas of industrial ecology, ecodesign<sup>[130]</sup> and ecolabelling (see side bar). In addition to the well-established "reduce, reuse and recycle" shoppers are using their purchasing power for ethical consumerism.<sup>[52]</sup>

## **Economic dimension**

Sustainability interfaces with economics through the social and ecological consequences of economic activity.<sup>[21]</sup> Sustainability economics represents: "... a broad interpretation of ecological economics where environmental and ecological variables and issues are basic but part of a multidimensional perspective. Social, cultural, health-related and monetary/financial aspects have to be integrated into the analysis."<sup>[131]</sup> At present the average per capita consumption of people in the developing world is sustainable but population numbers are increasing and individuals are aspiring to high consumption Western lifestyles. The developed world population is only increasing slightly but consumption levels are unsustainable. The challenge for sustainability is to curb and manage Western consumption while raising the standard of living of the developing world without increasing its resource use and environmental impact. This must be done by using strategies and technology that break the link between, on the one hand, economic growth and on the other, environmental damage and resource depletion.<sup>[132]</sup>

In addressing this issue several key areas have been targeted for economic analysis and reform: the environmental effects of unconstrained economic growth; the consequences of nature being treated as an economic externality; and the possibility of a more ethical economics that takes greater account of the social and environmental consequences of market behaviour.<sup>[133]</sup>

## **Economic opportunity**

Treating the environment as an externality may generate short-term profit at the expense of sustainability.<sup>[150]</sup> Sustainable business practices, on the other hand, integrate ecological concerns with social and economic ones (i.e., the triple bottom line).<sup>[151]</sup> Growth that depletes ecosystem services is sometimes termed "uneconomic growth" as it leads to a decline in quality of life.<sup>[152][153]</sup> Minimising such growth can provide opportunities for local businesses. For example, industrial waste can be treated as an "economic resource in the wrong place". The benefits of waste reduction include savings from disposal costs, fewer environmental penalties, and reduced liability insurance. This may lead to increased market share due to an improved public image.<sup>[154][155]</sup> Energy efficiency can also increase profits by reducing costs.

The idea of sustainability as a business opportunity has led to the formation of organizations such as the Sustainability Consortium of the Society for

Organizational Learning, the Sustainable Business Institute, and the World Council for Sustainable Development.<sup>[156]</sup> The expansion of sustainable business opportunities can contribute to job creation through the introduction of green-collar workers.<sup>[157]</sup>

### **Social dimension** *Social sustainability*

Sustainability issues are generally expressed in scientific and environmental terms, but implementing change is a social challenge that entails, among other things, international and national law, urban planning and transport, local and individual lifestyles and ethical consumerism.<sup>[158]</sup> "The relationship between human rights and human development, corporate power and environmental justice, global poverty and citizen action, suggest that responsible global citizenship is an inescapable element of what may at first glance seem to be simply matters of personal consumer and moral choice."<sup>[159]</sup>

### **Peace, security, social justice**

Social disruptions like war, crime and corruption divert resources from areas of greatest human need, damage the capacity of societies to plan for the future, and generally threaten human well-being and the environment.<sup>[159]</sup> Broad-based strategies for more sustainable social systems include: improved education and the political empowerment of women, especially in developing countries; greater regard for social justice notably equity between rich and poor both within and between countries; and intergenerational equity.<sup>[55]</sup> Depletion of natural resources including fresh water<sup>[160]</sup> increases the likelihood of "resource wars".<sup>[161]</sup> This aspect of sustainability has been referred to as environmental security and creates a clear need for global environmental agreements to manage resources such as aquifers and rivers which span political boundaries, and to protect global systems including oceans and the atmosphere.<sup>[162]</sup>

### **Human settlements**

One approach to sustainable living, exemplified by small-scale urban transition towns and rural ecovillages, seeks to create self-reliant communities based on principles of simple living, which maximise self-sufficiency particularly in food production. These principles, on a broader scale, underpin the concept of a bioregional economy.<sup>[164]</sup> Other approaches, loosely based around new urbanism, are successfully reducing environmental impacts by altering the built environment to create and preserve sustainable cities which support sustainable transport. Residents in compact urban neighbourhoods drive fewer miles, and have significantly lower environmental impacts across a range of measures, compared with those living in sprawling suburbs.<sup>[165]</sup>

Ultimately, the degree of human progress towards sustainability will depend on large scale social movements which influence both community choices and the built environment. Eco-municipalities may be one such movement.<sup>[166]</sup> Eco-municipalities take a systems approach, based on sustainability principles. The eco-municipality movement is participatory, involving community members in a bottom-up approach.

In Sweden, more than 70 cities and towns — 25 per cent of all municipalities in the country — have adopted a common set of "Sustainability Principles" and implemented these systematically throughout their municipal operations. There are now twelve eco-municipalities in the United States and the American Planning Association has adopted sustainability objectives based on the same principles.<sup>[163]</sup>

## Human relationship to nature

### Human and nature

According to Murray Bookchin, the idea that humans must dominate nature is common in hierarchical societies. Bookchin contends that capitalism and market relationships, if unchecked, have the capacity to reduce the planet to a mere resource to be exploited. Nature is thus treated as a commodity: "The plundering of the human spirit by the market place is paralleled by the plundering of the earth by capital."<sup>[167]</sup> Still more basically, Bookchin argued that most of the activities that consume energy and destroy the environment are senseless because they contribute little to quality of life and well being. The function of work is to legitimise, even create, hierarchy. For this reason understanding the transformation of organic into hierarchical societies is crucial to finding a way forward.<sup>[168]</sup>

Social ecology, founded by Bookchin, is based on the conviction that nearly all of humanity's present ecological problems originate in, indeed are mere symptoms of, dysfunctional social arrangements. Whereas most authors proceed as if our ecological problems can be fixed by implementing recommendations which stem from physical, biological, economic etc studies, Bookchin's claim is that these problems can only be resolved by understanding the underlying social processes and intervening in those processes by applying the concepts and methods of the social sciences.<sup>[169]</sup>

Deep ecology establishes principles for the well-being of all life on Earth and the richness and diversity of life forms. This is only compatible with a substantial decrease of the human population and the end of human interference with the nonhuman world. To achieve this, deep ecologists advocate policies for basic economic, technological, and ideological structures that will improve the *quality of life* rather than the *standard of living*. Those who subscribe to these principles are obliged to make the necessary change happen.

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### **Course description**

The Course deals with organizational theories of management, details with motivation aspects of employees in organizational settings, rational planning model, personality theories, organizational structure, organizational culture, as well as organizational development and its interventions.

### **Course objectives**

- To build the students capacity in becoming motivated employees at their work places after school.
- To educate students with the various issues that may affect the organizational development.
- To provide skills of understanding organizational structures & culture on performance management.
- To transfer basic knowledge of management to students.

### **Course content**

#### **Introduction**

- Definition of organizational theory
- History of organizational management
- Specific contribution of different scholars to organizational development
- Methods used in organizational studies

#### **Theories and models of Organizational Management**

- Scientific Management
- Rational decision making Model
- Mintzberg's managerial roles

#### **Motivation in Organizations**

There are many different motivation theories that include

Attribution theory

Equity theory

Maslow's hierarchy of needs

Incentive theory

Model of emotional labor in organizations

Frederick Hertzberg two-factor theory

Their criticisms and relevance to organizational performance

#### **Rational planning model**

- Definition of the model
- Method of verifying the problem
- Its requirements and limitations
- The bounded rational decision making model: a realistic approach
- Assumptions of the bounded rational decision making model

#### **Personality traits theories**

- The Big five personality traits these include; Openness, conscientiousness, extraversion, agreeableness, neuroticism.
- Implications of the theories to the organizational development, management & performance.



- Criticisms of the theories.

### **Organizational structure**

- Definition of organizational structure
- Common success criteria for organizational structures
- Forms of Organizational structures

### **Organizational Development (OD)**

- Definition of organizational development
- Overview of organizational development
- Different concepts used in OD
- OD interventions

### **Organizational Culture**

- Definition of organizational culture
- Types of organizational cultures
- Elements used to describe organizational culture
- Organizational communication perspective on culture

**Mode of delivery** Face to face lectures

### **Assessment**

**Coursework** 40%

**Exams** 60%

**Total Mark** 100%

**Organizational studies, organizational behavior, and organizational theory** is the systematic study and careful application of knowledge about how people - as individuals and as groups - act within organizations. Organizational Behaviour studies encompasses the study of organizations from multiple viewpoints, methods, and levels of analysis. For instance, one divides these multiple viewpoints into three perspectives: modern, symbolic, and postmodern. Another traditional distinction, present especially in American academia, is between the study of "micro" organizational behavior -- which refers to individual and group dynamics in an organizational setting -- and "macro" organizational theory which studies whole organizations, how they adapt, and the strategies and structures that guide them. To this distinction, some scholars have added an interest in "meso" -- primarily interested in power, culture, and the networks of individuals and units in organizations -- and "field" level analysis which study how whole populations of organizations interact. In Europe these distinctions do exist as well, but are more rarely reflected in departmental divisions.

Whenever people interact in organizations, many factors come into play. Modern organizational studies attempt to understand and model these factors. Like all modernist social sciences, organizational studies seek to control, predict, and explain. There is some controversy over the ethics of controlling workers' behavior. As such, organizational behavior or OB (and its cousin, Industrial psychology) have at times been accused of being the scientific tool of the powerful! Those accusations notwithstanding, OB can play a major role in organizational development and success.

One of the main goal of organizational theorists is, according to Simms (1994) is "to revitalize organizational theory and develop a better conceptualization of organizational life." An organizational theorist should carefully consider levels assumptions being made in theory, and is concerned to help managers and administrators.

## History

The Greek philosopher Plato wrote about the essence of leadership. Aristotle addressed the topic of persuasive communication. The writings of 16th century Italian philosopher Niccolò Machiavelli laid the foundation for contemporary work on organizational power and politics. In 1776, Adam Smith advocated a new form of organizational structure based on the division of labour. One hundred years later, German sociologist Max Weber wrote about rational organizations and initiated discussion of charismatic leadership. Soon after, Frederick Winslow Taylor introduced the systematic use of goal setting and rewards to motivate employees. In the 1920s, Australian-born Harvard professor Elton Mayo and his colleagues conducted productivity studies at Western Electric's Hawthorne plant in the United States.

Though it traces its roots back to Max Weber and earlier, organizational studies is generally considered to have begun as an academic discipline with the advent of scientific management in the 1890s, with Taylorism representing the peak of this movement. Proponents of scientific management held that rationalizing the organization with precise sets of instructions and time-motion studies would lead to increased productivity. Studies of different compensation systems were carried out.

After the First World War, the focus of organizational studies shifted to analysis of how human factors and psychology affected organizations, a transformation propelled by the identification of the Hawthorne Effect. This Human Relations Movement focused on teams, motivation, and the actualization of the goals of individuals within organizations.

Prominent early scholars included Chester Barnard, Henri Fayol, Frederick Herzberg, Abraham Maslow, David McClelland, and Victor Vroom.

The Second World War further shifted the field, as the invention of large-scale logistics and operations research led to a renewed interest in rationalist approaches to the study of organizations. Interest grew in theory and methods native to the sciences, including systems theory, the study of organizations with a complexity theory perspective and complexity strategy. Influential work was done by Herbert Alexander Simon and James G. March and the so-called "Carnegie School" of organizational behavior.

In the 1960s and 1970s, the field was strongly influenced by social psychology and the emphasis in academic study was on quantitative research. An explosion of theorizing, much of it at Stanford University and Carnegie Mellon, produced Bounded Rationality, Informal Organization, Contingency Theory, Resource

Dependence, Institutional Theory, and Organizational Ecology theories, among many others.

Starting in the 1980s, cultural explanations of organizations and change became an important part of study. Qualitative methods of study became more acceptable, informed by anthropology, psychology and sociology. A leading scholar was Karl Weick.

## **Specific Contributions**

Frederick Winslow Taylor

Frederick Winslow Taylor (1856-1915) was the first person who attempted to study human behavior at work using a systematic approach. Taylor studied human characteristics, social environment, task, physical environment, capacity, speed, durability, cost and their interaction with each other. His overall objective was to reduce and/or remove human variability. Taylor worked to achieve his goal of making work behaviors stable and predictable so that maximum output could be achieved. He relied strongly upon monetary incentive systems, believing that humans are primarily motivated by money. He faced some strong criticism, including being accused of telling managers to treat workers as machines without minds, but his work was very productive and laid many foundation principles for modern management studies. An enlightening book about the life of Frederick Winslow Taylor and his studies is that by Kanigel (1997).

Elton Mayo

Elton Mayo, an Australian national, headed the Hawthorne Studies at Harvard. In his classic writing in 1931, *Human Problems of an Industrial Civilization*, he advised managers to deal with emotional needs of employees at work.

Mary Parker Follett

Mary Parker Follett was a pioneer management consultant in the industrial world. As a writer, she provided analyses on workers as having complex combinations of attitude, beliefs, and needs. She told managers to motivate employees on their job performance, a "pull" rather than a "push" strategy.

Douglas McGregor

Douglas McGregor proposed two theories/assumptions, which are very nearly the opposite of each other, about human nature based on his experience as a management consultant. His first theory was "Theory X", which is pessimistic and negative; and according to McGregor it is how managers traditionally perceive their workers. Then, in order to help managers replace that theory/assumption, he gave "Theory Y" which takes a more modern and positive approach. He believed that managers could achieve more if they start perceiving their employees as self-energized, committed, responsible and creative beings. By means of his Theory Y, he in fact challenged the traditional theorists to adopt a developmental approach to

their employees. He also wrote a book, *The Human Side of Enterprise*, in 1960; this book has become a foundation for the modern view of employees at work.

## **Current state of the field**

Organizational behaviour is currently a growing field. Organizational studies departments generally form part of business schools, although many universities also have industrial psychology and industrial economics programs.

The field is highly influential in the business world with practitioners like Peter Drucker and Peter Senge, who turned the academic research into business practices. Organizational behaviour is becoming more important in the global economy as people with diverse backgrounds and cultural values have to work together effectively and efficiently. It is also under increasing criticism as a field for its ethnocentric and pro-capitalist assumptions (see *Critical Management Studies*).

During the last 20 years organizational behavior study and practice has developed and expanded through creating integrations with other domains:

- Anthropology became an interesting prism to understanding firms as communities, by introducing concepts like Organizational culture, 'organizational rituals' and 'symbolic acts' enabling new ways to understand organizations as communities.
- Leadership Understanding: the crucial role of leadership at various level of an organization in the process of change management.
- Ethics and their importance as pillars of any vision and one of the most important driving forces in an organization.

## **Methods used in organizational studies**

A variety of methods are used in organizational studies. They include quantitative methods found in other social sciences such as multiple regression, non-parametric statistics, time dependent analysis, and ANOVA. In addition, computer simulation in organizational studies has a long history in organizational studies. Qualitative methods are also used, such as ethnography, which involves direct participant observation, single and multiple case analysis, and other historical methods. In the last fifteen years or so, there has been greater focus on language, metaphors, and organizational storytelling.

Kurt Lewin attended the Macy conferences and is commonly identified as the founder of the movement to study groups scientifically.

The systems framework is also fundamental to organizational theory as organizations are complex dynamic goal-oriented processes. One of the early thinkers in the field was Alexander Bogdanov, who developed his Tectology, a theory widely considered a precursor of Bertalanffy's General Systems Theory, aiming to model and design human organizations. Kurt Lewin was particularly influential in developing the systems perspective within organizational theory and coined the term "systems of ideology", from his frustration with behavioural psychologies that

became an obstacle to sustainable work in psychology (see Ash 1992: 198-207). The complexity theory perspective on organizations is another systems view of organizations.

The systems approach to organizations relies heavily upon achieving negative entropy through openness and feedback. A systemic view on organizations is transdisciplinary and integrative. In other words, it transcends the perspectives of individual disciplines, integrating them on the basis of a common "code", or more exactly, on the basis of the formal apparatus provided by systems theory. The systems approach gives primacy to the interrelationships, not to the elements of the system. It is from these dynamic interrelationships that new properties of the system emerge. In recent years, *systems thinking* has been developed to provide techniques for studying systems in holistic ways to supplement traditional reductionistic methods. In this more recent tradition, systems theory in organizational studies is considered by some as a humanistic extension of the natural sciences.

## **Topic 2; Theories and models of organizational studies**

### Decision making

- Mintzberg's managerial roles
- Rational Decision-Making Model
- **Scientific management**

### **Organization structures and dynamics**

- Bureaucracy
- Complexity theory and organizations
- Contingency theory
- Hybrid organisation
- Informal Organization

### **Personality traits theories**

- Big Five personality traits
- Holland's Typology of Personality and Congruent Occupations
- Myers-Briggs Type Indicator

### Control and stress modelling

- Herzberg's Two factor theory
- Theory X and Theory Y

### Motivation in organizations

Motivation the forces either internal or external to a person that arouse enthusiasm and resistance to pursue a certain course of action. According to Baron et al. (2008):

"Although motivation is a broad and complex concept, organizational scientists have agreed on its basic characteristics. Drawing from various social sciences, we define motivation as the set of processes that arouse, direct, and maintain human behavior toward attaining some goal"

There are many different motivation theories such as:

- Attribution theory
- Equity theory
- Maslow's hierarchy of needs
- Incentive theory (psychology)
- Model of emotional labor in organizations
- Frederick Herzberg two-factor theory

## **Theories and models of organizational studies**

### **Topic 2 b;Frederick Winslow Taylor**

to improve industrial efficiency. He is regarded as the father of scientific management, and was one of the first management consultants.<sup>[1]</sup>

Taylor was one of the intellectual leaders of the Efficiency Movement and his ideas, broadly conceived, were highly influential in the Progressive Era.

### **Scientific management**

Taylor believed that the industrial management of his day was amateurish, that management could be formulated as an academic discipline, and that the best results would come from the partnership between a trained and qualified management and a cooperative and innovative workforce. Each side needed the other, and there was no need for trade unions.

Future U.S. Supreme Court justice Louis Brandeis coined the term *scientific management* in the course of his argument for the Eastern Rate Case before the Interstate Commerce Commission in 1910. Brandeis debated that railroads, when governed according to the principles of Taylor, did not need to raise rates to increase wages. Taylor used Brandeis's term in the title of his monograph *The Principles of Scientific Management*, published in 1911. The Eastern Rate Case propelled Taylor's ideas to the forefront of the management agenda. Taylor wrote to Brandeis "I have rarely seen a new movement started with such great momentum as you have given this one." Taylor's approach is also often referred to, as *Taylor's Principles*, or frequently disparagingly, as *Taylorism*. Taylor's scientific management consisted of four principles:

1. Replace rule-of-thumb work methods with methods based on a scientific study of the tasks.
2. Scientifically select, train, and develop each employee rather than passively leaving them to train themselves.

3. Provide "Detailed instruction and supervision of each worker in the performance of that worker's discrete task" (Montgomery 1997: 250).
4. Divide work nearly equally between managers and workers, so that the managers apply scientific management principles to planning the work and the workers actually perform the tasks.

## **Managers and workers**

Taylor had very precise ideas about how to introduce his system:

It is only through *enforced* standardization of methods, *enforced* adoption of the best implements and working conditions, and *enforced* cooperation that this faster work can be assured. And the duty of enforcing the adoption of standards and enforcing this cooperation rests with *management* alone.

Workers were supposed to be incapable of understanding what they were doing. According to Taylor this was true even for rather simple tasks.

'I can say, without the slightest hesitation,' Taylor told a congressional committee, 'that the science of handling pig-iron is so great that the man who is ... physically able to handle pig-iron and is sufficiently phlegmatic and stupid to choose this for his occupation is rarely able to comprehend the science of handling pig-iron.'

The introduction of his system was often resented by workers and provoked numerous strikes. The strike at Watertown Arsenal led to the congressional investigation in 1912. Taylor believed the labourer was worthy of his hire, and pay was linked to productivity. His workers were able to earn substantially more than those in similar industries and this earned him enemies among the owners of factories where scientific management was not in use.

## **Propaganda techniques**

Taylor promised to reconcile labor and capital.

With the triumph of scientific management, unions would have nothing left to do, and they would have been cleansed of their most evil feature: the restriction of output. To underscore this idea, Taylor fashioned the myth that 'there has never been a strike of men working under scientific management', trying to give it credibility by constant repetition. In similar fashion he incessantly linked his proposals to shorter hours of work, without bothering to produce evidence of "Taylorized" firms that reduced working hours, and he revised his famous tale of Schmidt carrying pig iron at Bethlehem Steel at least three times, obscuring some aspects of his study and stressing others, so that each successive version made Schmidt's exertions more impressive, more voluntary and more rewarding to him than the last. Unlike [Harrington] Emerson, Taylor was not a charlatan, but his ideological message required the suppression of all evidence of worker's dissent, of

coercion, or of any human motives or aspirations other than those his vision of progress could encompass.

## Management theory

Taylor thought that by analyzing work, the "One Best Way" to do it would be found. He is most remembered for developing the time and motion study. He would break a job into its component parts and measure each to the hundredth of a minute. One of his most famous studies involved shovels. He noticed that workers used the same shovel for all materials. He determined that the most effective load was 21½ lb, and found or designed shovels that for each material would scoop up that amount. He was generally unsuccessful in getting his concepts applied and was dismissed from Bethlehem Steel. It was largely through the efforts of his disciples (most notably H.L. Gantt) that industry came to implement his ideas. Nevertheless, the book he wrote after parting company with Bethlehem Steel, *Shop Management*, sold well.

## Relations with ASME

Taylor was president of the American Society of Mechanical Engineers (ASME) from 1906 to 1907. While president, he tried to implement his system into the management of the ASME but was met with much resistance. He was only able to reorganize the publications department and then only partially. He also forced out the ASME's long-time secretary, Morris L. Cooke, and replaced him with Calvin W. Rice. His tenure as president was trouble-ridden and marked the beginning of a period of internal dissension within the ASME during the Progressive Age.

In 1912, Taylor collected a number of his articles into a book-length manuscript which he submitted to the ASME for publication. The ASME formed an ad hoc committee to review the text. The committee included Taylor allies such as James Mapes Dodge and Henry R. Towne. The committee delegated the report to the editor of the *American Machinist*, Leon P. Alford. Alford was a critic of the Taylor system and the report was negative. The committee modified the report slightly, but accepted Alford's recommendation not to publish Taylor's book. Taylor angrily withdrew the book and published *Principles* without ASME approval.

## Criticism of Taylor

Management theorist Henry Mintzberg is highly critical of Taylor's methods. Mintzberg states that an obsession with efficiency allows measurable benefits to overshadow less quantifiable social benefits completely, and social values get left behind

## Topic 2 c; Henry Mintzberg

Professor **Henry Mintzberg**, OC, OQ, FRSC (born in Montreal, September 2, 1939) is an internationally renowned academic and author on business and management. He is currently the Cleghorn Professor of Management Studies at the Desautels Faculty of Management of McGill University in Montreal, Quebec, Canada, where he has been teaching since 1968, after earning his Master's degree in Management and



Ph.D. from the MIT Sloan School of Management in 1965 and 1968 respectively.<sup>[1]</sup> His undergraduate degree in mechanical engineering was from McGill University. From 1991 to 1999, he was a visiting professor at INSEAD.

Henry Mintzberg writes prolifically on the topics of management and business strategy, with more than 150 articles and fifteen books to his name. His seminal book, *The Rise and Fall of Strategic Planning* (Mintzberg 1994), criticizes some of the practices of strategic planning today.

He recently published a book entitled *Managers Not MBAs* (Mintzberg 2004) which outlines what he believes to be wrong with management education today. Rather controversially, Mintzberg claims that prestigious graduate management schools like Harvard Business School and the Wharton Business School at the University of Pennsylvania are obsessed with numbers and that their overzealous attempts to make management a science are damaging the discipline of management. Mintzberg advocates more emphasis on post graduate programs that educate practicing managers (rather than students with little real world experience) by relying upon action learning and insights from their own problems and experiences. (See <http://www.impm.org/> and <http://www.CoachingOurselves.com/>)

Ironically, although Professor Mintzberg is quite critical about the strategy consulting business, he has twice won the McKinsey Award for publishing the best article in the Harvard Business Review. Also, he is credited with co-creating the organigraph, which is taught in business schools.<sup>[2]</sup>

In 1997 he was made an Officer of the Order of Canada. In 1998 he was made an Officer of the National Order of Quebec. He is now a member of the Strategic Management Society.

Mintzberg runs two programs which have been designed to teach his alternative approach to management and strategic planning at McGill University: the International Masters in Practicing Management (I.M.P.M.) in association with the McGill Executive Institute and the International Masters for Health Leadership (I.M.H.L.). With Phil LeNir, he owns CoachingOurselves International, a private company using his alternative approach for management development directly in the workplace.

He is married to Sasha Sadilova and has two children from a previous marriage, Susie and Lisa.

## **Theory on Organizational Forms**

**The organizational configurations framework of Mintzberg is a model that describes six valid organizational configurations**

1. **Mutual adjustment**, which achieves coordination by the simple process of informal communication (as between two operating employees)

2. **Direct supervision**, is achieved by having one person issue orders or instructions to several others whose work interrelates (as when a boss tells others what is to be done, one step at a time)
3. **Standardization of work processes**, which achieves coordination by specifying the work processes of people carrying out interrelated tasks (those standards usually being developed in the technostructure to be carried out in the operating core, as in the case of the work instructions that come out of time-and-motion studies)
4. **Standardization of outputs**, which achieves coordination by specifying the results of different work (again usually developed in the technostructure, as in a financial plan that specifies subunit performance targets or specifications that outline the dimensions of a product to be produced)
5. **Standardization of skills** (as well as knowledge), in which different work is coordinated by virtue of the related training the workers have received (as in medical specialists - say a surgeon and an anesthetist in an operating room - responding almost automatically to each other's standardized procedures)
6. **Standardization of norms**, in which it is the norms infusing the work that are controlled, usually for the entire organization, so that everyone functions according to the same set of beliefs (as in a religious order)

**According to the organizational configurations model of Mintzberg each organization can consist of a maximum of six basic parts:**

1. Strategic Apex (top management)
2. Middle Line (middle management)
3. Operating Core (operations, operational processes)
4. Techno structure (analysts that design systems, processes, etc)
5. Support Staff (support outside of operating workflow)
6. Ideology (halo of beliefs and traditions; norms, values, culture)

### Topic 3. Rational planning model

The **rational planning model** is the process of realizing a problem, establishing and evaluating planning criteria, create alternatives, implementing alternatives, and monitoring progress of the alternatives. It is used in designing neighborhoods, cities, and regions. The rational planning model is central in the development of modern urban planning and transportation planning. The very similar **rational decision-making model**, as it is called in organizational behavior is a process for making logically sound decisions. This multi-step model and aims to be logical and follow the orderly path from problem identification through solution.

### Method

Rational decision-making or planning follows a series of steps detailed below:

## Verify, Define, and Detail the problem

Verifying, defining & detailing the problem (problem definition, goal definition, information gathering). This step includes recognizing the problem, defining an initial solution, and starting primary analysis. Examples of this are creative devising, creative ideas, inspirations, breakthroughs, and brainstorming. The very first step which is normally overlooked by the top level management is defining the exact problem. Though we think that the problem identification is obvious, many times it is not. The rational decision making model is a group-based decision making process. If the problem is not identified properly then we may face a problem as each and every member of the group might have a different definition of the problem. Hence, it is very important that the definition of the problem is the same among all group members. Only then is it possible for the group members to find alternate sources or problem solving in an effective manner.

## Generate all possible solutions

This step encloses two to three final solutions to the problem and preliminary implementation to the site. In planning, examples of this are Planned Units of Development and downtown revitalizations.

This activity is best done in groups, as different people may contribute different ideas or alternative solutions to the problem. If you are not able to generate alternative solutions, there is a chance that you might not arrive at an optimal or a rational decision. For exploring the alternatives it is necessary to gather information. Technology may help with gathering this information.

## Generate objective assessment criteria

Evaluative criteria are measurements to determine success and failure of alternatives. This step contains secondary and final analysis along with secondary solutions to the problem. Examples of this are site suitability and site sensitivity analysis. After going thoroughly through the process of defining the problem, exploring for all the possible alternatives for that problem and gathering information this step says evaluate the information and the possible options to anticipate the consequences of each and every possible alternative that is thought of. At this point of time we have to also think over for optional criteria on which we will measure the success or failure of our decision taken.

## Choose the best solution which we have already generated

This step comprises a final solution and secondary implementation to the site. At this point the process has developed into different strategies of how to apply the solutions to the site. Based on the criteria of assessment and the analysis done in previous steps, choose the best solution which we have generated. Once we go

through the above steps thoroughly, implementing the fourth step is easy job. These four steps form the core of the Rational Decision Making Model.

### **Implementing the preferred alternative**

This step includes final implementation to the site and preliminary monitoring of the outcome and results of the site. This step is the building/renovations part of the process.

### **Monitoring and evaluating outcomes and results**

This step contains the secondary and final monitoring of the outcomes and results of the site. This step takes place over a long period of time.

### **Feedback**

Modify the decisions and actions taken based on the evaluation.

### **Requirements and limitations**

However, there are a lot of assumptions, requirements without which the rational decision model is a failure. Therefore, they all have to be considered. The model assumes that we have or should or can obtain adequate information, both in terms of quality, quantity and accuracy. This applies to the situation as well as the alternative technical situations. It further assumes that you have or should or can obtain substantive knowledge of the cause and effect relationships relevant to the evaluation of the alternatives. In other words, it assumes that you have a thorough knowledge of all the alternatives and the consequences of the alternatives chosen. It further assumes that you can rank the alternatives and choose the best of it. The following are the limitations for the Rational Decision Making Model:

- It requires a great deal of time.
- It requires great deal of information
- It assumes rational, measurable criteria are available and agreed upon.
- It assumes accurate, stable and complete knowledge of all the alternatives, preferences, goals and consequences.
- It assumes a rational, reasonable, non – political world.

### **The Bounded Rational Decision Making Model: a realistic approach**

The Rational Decision Making Model, amongst its many assumptions assumes that there is a single, best solution that will maximize the desired outcomes.

Now, the bounded rationality model says that the problems and the decisions are to be reduced to such a level that they will be understood. In other words, the model suggests that we should interpret information and extract essential features and then within these boundaries we take a rational decision.

The model turns towards compromising on the decision making process though it is a structured decision making model. The decision maker takes the decision or is assumed to choose a solution though not a perfect solution but “good enough” solution based on the limited capacity of the group leader to handle the complexity of the situation, ambiguity and information. The steps involved in the decision making are alike to the rational decision making process the model assumes that the perfect knowledge about all the alternatives are not possible for a human being to know. Hence, based on the limited knowledge he takes a good enough knowledge though not a perfect decision.

To cut the long story short we can say that the decision that is taken is rational but is taken in a bounded area and the choice of alternatives is though not perfect is nearer to the perfect decision. In rational process the assumption is that the exact problem, all the alternatives, should be thoroughly known to the decision maker. However, the realistic approach of human limitation is overlooked in rational decision making, but the same approach is considered mainly in the bounded rational decision making process.

Hence, it is also called as a Realistic Approach for Rational Decision Making Process.

### Assumptions of the model

The rational decision making model contains a number of assumptions.

- Problem clarity: The problem is clear and unambiguous. The decision maker is assumed to have complete information regarding situation.
- Known options: It is assumed the decision maker can identify all the relevant criteria and can list all the viable alternatives. Furthermore, the decision maker is aware of all possible consequences of each alternative.
- Clear preferences: Rationality assumes that the criteria and alternatives can be ranked and weighted to reflect their importance.
- Constant preferences: It's assumed that the specific decision criteria are constant and that the weights assigned to them are stable over time.
- No time or cost constraints: The rational decision maker can obtain full information about criteria and alternatives because it's assumed that there are no time or cost constraints.
- Maximum payoff: The rational decision maker will choose the alternative that yields the highest perceived value.

### Three concepts of rational planning

John Friedmann describes the three concepts of rationality that have informed planning as:

#### Market rationality

**Market rationality** is described as being grounded in metaphysics of possessive individualism and which predicates the individual as existing prior to society. Society then becomes the mechanism that enables individuals to pursue their

private interests. This prior-to status gives market rationally a quasi-natural character, and ranks it as being beyond human intention, thereby making its assumptions unavoidably compelling. From this perspective, reason is the means toward the maximization of private satisfactions.

## Social rationality

**Social rationality** is the opposite assumption, that the social group grants the individual their identity through membership in the group. Reason becomes the tool of the collective interest and functions as the avenue toward communal satisfactions.

## Methodology

The three types of rationality that Friedman describes as structuring modern rational planning model are united on their reliance upon the methodology of empirical scientific investigation.

The distinctions that Friedmann makes allows the rational planning model to be used as a tool of social speech that creates its own processes according to the uses to which it is put. The rational planning model acts as a mediator between market and social rationality, and exists between different criteria of what is fundamentally rational.

The rational planning model has its origins in the scientific and philosophic revolutions of the 16th and 17th centuries, and in the social revolutions of the Enlightenment which gave public form to urban planning fundamentals and rational worldviews. The profession of modern urban planning is not based on the rational planning model; it identifies what planners have come to identify as rational and have come to an understanding of how the rational planning model affects an urban planner's decisions. The modern style of urban planning is essentially the rational planning model in its ideological framework.

The rational planning model has also been called the classical rational problem solving process, the rational comprehensive method, the "policy analysis strand of conservative forms of societal guidance planning", and "the ruling or normal paradigm that governs the practice of modern planning." Although it has a myriad of names, it has a singular approach to problem solving. This approach is the systematic evaluation of alternative means toward a preferred goal. Once a goal has been selected, the prevailing assumption is that there are only certain correct ways of achieving it.

## Current status

While the rational planning model was innovative at its conception, the concepts are controversial and questionable processes today. The rational planning model has fallen out of mass use as of the last decade.

## Topic 4.Organisational structures and group dynamics

### Complexity theory and organizations

Complexity theory has been used in the field of strategic management and organizational studies, sometimes called complexity strategy.



A way of modelling a Complex Adaptive System. A system with high adaptive capacity exerts complex adaptive behavior in a changing environment.

Complex adaptive systems (CAS) are contrasted with ordered and chaotic systems by the relationship that exists between the system and the agents which act within it. In an ordered system the level of constraint means that all agent behaviour is limited to the rules of the system. In a chaotic system the agents are unconstrained and susceptible to statistical and other analysis. In a CAS, the system and the agents co-evolve; the system lightly constrains agent behaviour, but the agents modify the system by their interaction with it.

CAS approaches to strategy seek to understand the nature of system constraints and agent interaction and generally takes an evolutionary or naturalistic approach to strategy.

### Contingency theory

**Contingency theory** is a class of behavioural theory that claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. Several contingency approaches were developed concurrently in the late 1960s.

They suggested that previous theories such as Weber's bureaucracy and Taylor's scientific management had failed because they neglected that management style and organizational structure were influenced by various aspects of the environment: the contingency factors. There could not be "one best way" for leadership or organization.

Historically, contingency theory has sought to formulate broad generalizations about the formal structures that are typically associated with or best fit the use of different technologies. The perspective originated with the work of Joan Woodward (1958), who argued that technologies directly determine differences in such organizational attributes as span of control, centralization of authority, and the formalization of rules and procedures.

Fred Fiedler's contingency model focused on individual leadership.

William Richard Scott describes contingency theory in the following manner: "The best way to organize depends on the nature of the environment to which the

organization must relate". Other researchers including Paul Lawrence, Jay Lorsch, and James D. Thompson were complementing to this statement and were more interested in the impact of contingency factors on organizational structure. Their structural contingency theory was the dominant paradigm of organizational structural theories for most of the 1970s. A major empirical test was furnished by Johannes M Pennings who examined the interaction between environmental uncertainty, organization structure and various aspects of performance.

## Hybrid organization

A **hybrid organization** is a body that operates in both the public sector and the private sector, simultaneously fulfilling public duties and developing commercial market activities. As a result the hybrid organization becomes a mixture of both a part of government and a commercial enterprise.

Examples include universities that provide consultancy services on a commercial basis, social housing providers that compete with commercial property developers, public schools that offer trainings for companies and hospitals that provide private medical check-ups.

Hybrid organizations have strong as well as weak points. The combination of public duties and commercial activities can have significant synergy effects. But there is also the risk of unfair competition and that market activities could oust public activities.

The hybrid organization is not only mix of public and private organization, it is a wider organizational concept based on postmodern perspective of organization theory. "Hybrid may occur either because designer deliberately mix forms in an attempt to blend the advantages of two or more different types or because the organization changing"

## Personality traits theories

### The big five personality traits

In contemporary psychology, the "**Big Five**" factors of personality are five broad domains or dimensions of personality which have been scientifically discovered to define human personality at the highest level of organization (Goldberg, 1993) These five over-arching domains have been found to contain and subsume more-or-less all known personality traits within their five domains and to represent the basic structure behind all personality traits. They have brought order to the often-bewildering array of specific lower-level personality concepts that are constantly being proposed by psychologists, which are often found to be overlapping and confusing. These five factors provide a rich conceptual framework for integrating all the research findings and theory in personality psychology. The big five traits are



also referred to as the "**Five Factor Model**" or FFM (Costa & McCrae, 1992), and as the Global Factors of personality (Russell & Karol, 1994).

The Big Five model is considered to be one of the most comprehensive, empirical, data-driven research findings in the history of personality psychology. Identifying the traits and structure of human personality has been one of the most fundamental goals in all of psychology. Over three or four decades of research, these five broad factors were gradually discovered and defined by several independent sets of researchers (Digman, 1990). These researchers began by studying all known personality traits and then factor-analyzing hundreds of measures of these traits (in self-report and questionnaire data, peer ratings, and objective measures from experimental settings) in order to find the basic, underlying factors of personality.

At least three sets of researchers have worked independently for decades on this problem and have identified generally the same Big Five factors: Goldberg at the Oregon Research Institute, Cattell at the University of Illinois, and Costa and McCrae at the National Institutes of Health. These three sets of researchers used somewhat different methods in finding the five traits, and thus each set of five factors has somewhat different names and definitions. However, all three sets have been found to be highly inter-correlated and factor-analytically aligned.

It is important to note that these traits have been found to organize personality at the highest level, and so they are most helpful as a conceptual, organizing framework for regular, lower-level personality traits. However, because the Big Five traits are so broad and comprehensive, they are not nearly as powerful in predicting and explaining actual behavior as are the more numerous lower-level traits. Many studies have confirmed that in predicting actual behavior the more numerous facet or primary level traits are far more effective (e.g. Mershon & Gorsuch, 1988; Paunonen & Ashton, 2001).

The Big five factors are Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (OCEAN, or CANOE if rearranged). The Neuroticism factor is sometimes referred to as Emotional Stability. Some disagreement remains about how to interpret the Openness factor, which is sometimes called "Intellect".<sup>[25]</sup> Each factor consists of a cluster of more specific traits that correlate together. For example, extraversion includes such related qualities as sociability, excitement seeking, impulsiveness, and positive emotions.

The Five Factor Model is a purely descriptive model of personality, but psychologists have developed a number of theories to account for the Big Five.

## Overview

The Big Five factors and their constituent traits can be summarized as follows:

- **Openness** - appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience.

- **Conscientiousness** - a tendency to show self-discipline, act dutifully, and aim for achievement; planned rather than spontaneous behavior.
- **Extraversion** - energy, positive emotions, urgency, and the tendency to seek stimulation in the company of others.
- **Agreeableness** - a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.
- **Neuroticism** - a tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability; sometimes called emotional instability.

When scored for individual feedback, these traits are frequently presented as percentile scores. For example, a Conscientiousness rating in the 80th percentile indicates a relatively strong sense of responsibility and orderliness, whereas an Extraversion rating in the 5th percentile indicates an exceptional need for solitude and quiet.

Although these trait clusters are statistical aggregates, exceptions may exist on individual personality profiles. On average, people who register high in Openness are intellectually curious, open to emotion, interested in art, and willing to try new things. A particular individual, however, may have a high overall Openness score and be interested in learning and exploring new cultures. Yet he or she might have no great interest in art or poetry. Situational influences also exist, as even extraverts may occasionally need time away from people.

The most frequently used measures of the Big Five comprise either items that are self-descriptive sentence or, in the case of lexical measures, items that are single adjectives. Due to the length of sentence-based and some lexical measures, short forms have been developed and validated for use in applied research settings where questionnaire space and respondent time are limited, such as the 40-item balanced *International English Big-Five Mini-Markers*. or a very brief (10 item) measure of the big 5 domains

## Openness to Experience

**Openness** is a general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and variety of experience. The trait distinguishes imaginative people from down-to-earth, conventional people. People who are open to experience are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be, compared to closed people, more creative and more aware of their feelings. They are more likely to hold unconventional beliefs.

People with low scores on openness tend to have more conventional, traditional interests. They prefer the plain, straightforward, and obvious over the complex, ambiguous, and subtle. They may regard the arts and sciences with suspicion, regarding these endeavors as abstruse or of no practical use. Closed people prefer familiarity over novelty. They are conservative and resistant to change.

## Sample Openness items

- I have a rich vocabulary.
- I have a vivid imagination.
- I have excellent ideas.
- I spend time reflecting on things.
- I use difficult words.
- I am not interested in abstractions. (*reversed*)
- I do not have a good imagination. (*reversed*)
- I have difficulty understanding abstract ideas. (*reversed*)

## Conscientiousness

**Conscientiousness** is a tendency to show self-discipline, act dutifully, and aim for achievement. The trait shows a preference for planned rather than spontaneous behavior. It influences the way in which we control, regulate, and direct our impulses. Conscientiousness includes the factor known as Need for Achievement (NAch).

The benefits of high conscientiousness are obvious. Conscientious individuals avoid trouble and achieve high levels of success through purposeful planning and persistence. They are also positively regarded by others as intelligent and reliable. On the negative side, they can be compulsive perfectionists and workaholics.

### Sample Conscientiousness items

- I am always prepared.
- I am exacting in my work.
- I follow a schedule.
- I get chores done right away.
- I like order.
- I pay attention to details.
- I leave my belongings around. (*reversed*)
- I make a mess of things. (*reversed*)
- I often forget to put things back in their proper place. (*reversed*)
- I shirk my duties. (*reversed*)

## Extraversion

**Extraversion** is characterized by positive emotions, surgency, and the tendency to seek out stimulation and the company of others. The trait is marked by pronounced engagement with the external world. Extraverts enjoy being with people, and are often perceived as full of energy. They tend to be enthusiastic, action-oriented individuals who are likely to say "Yes!" or "Let's go!" to opportunities for excitement. In groups they like to talk, assert themselves, and draw attention to themselves.

Introverts lack the exuberance, energy, and activity levels of extraverts. They tend to be quiet, low-key, deliberate, and less involved in the social world. Their lack of social involvement should not be interpreted as shyness or depression. Introverts simply need less stimulation than extraverts and more time alone.

## Sample Extraversion items

- I am the life of the party.
- I don't mind being the center of attention.
- I feel comfortable around people.
- I start conversations.
- I talk to a lot of different people at parties.
- I am quiet around strangers. (*reversed*)
- I don't like to draw attention to myself. (*reversed*)
- I don't talk a lot. (*reversed*)
- I have little to say. (*reversed*)

## Neuroticism

**Neuroticism** is the tendency to experience negative emotions, such as anger, anxiety, or depression. It is sometimes called emotional instability. Those who score high in neuroticism are emotionally reactive and vulnerable to stress. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish the ability of a person scoring high on neuroticism to think clearly, make decisions, and cope effectively with stress.

At the other end of the scale, individuals who score low in neuroticism are less easily upset and are less emotionally reactive. They tend to be calm, emotionally stable, and free from persistent negative feelings. Freedom from negative feelings does not mean that low scorers experience a lot of positive feelings. Frequency of positive emotions is a component of the Extraversion domain.

## Sample Neuroticism items

- I am easily disturbed.
- I change my mood a lot.
- I get irritated easily.
- I get stressed out easily.
- I get upset easily.
- I have frequent mood swings.
- I often feel blue.
- I worry about things.
- I am relaxed most of the time. (*reversed*)
- I seldom feel blue. (*reversed*)

## Selected scientific findings

Ever since the 1990s when the consensus of psychologists gradually came to support the Big Five, there has been a growing body of research surrounding these personality traits (see for instance, Robert Hogan's edited book "Handbook of Personality Psychology" (Academic Press, 1997).

## Heritability

All five factors show an influence from both heredity and environment. Twin studies suggest that these effects contribute in roughly equal proportion. An analysis of the available studies found overall heritabilities for the Big Five traits as follows:

Openness: 57%  
Extraversion: 54%  
Conscientiousness: 49%  
Neuroticism: 48%  
Agreeableness: 42%

## Development

Many studies of longitudinal data, which correlate people's test scores over time, and cross-sectional data, which compare personality levels across different age groups, show a high degree of stability in personality traits during adulthood. More recent research and meta-analyses of previous studies, however, indicate that change occurs in all five traits at various points in the lifespan. The new research shows evidence for a maturation effect. On average, levels of Agreeableness and Conscientiousness typically increase with time, whereas Extraversion, Neuroticism, and Openness tend to decrease. In addition to these group effects, there are individual differences: different people demonstrate unique patterns of change at all stages of life.

## Sex differences

Cross-cultural research from 26 nations ( $N = 23,031$  subjects) and again in 55 nations ( $N = 17,637$  subjects) has shown a universal pattern of sex differences on responses to the Big Five Inventory. Women consistently report higher Neuroticism and Agreeableness, and men often report higher Extraversion and Conscientiousness. Sex differences in personality traits are larger in prosperous, healthy, and egalitarian cultures in which women have more opportunities that are equal to those of men.

## Birth order

The suggestion has often been made that individuals differ by the order of their births. Frank J. Sulloway argues that birth order is correlated with personality traits. He claims that firstborns are more conscientious, more socially dominant, less agreeable, and less open to new ideas compared to laterborns.

However, Sulloway's case has been called into question. One criticism is that his data confound family size with birth order. Subsequent analyses have shown that birth order effects are only found in studies where the subjects' personality traits are rated by family members (such as siblings or parents) or by acquaintances familiar with the subjects' birth order. Large scale studies using random samples and self-report personality tests like the NEO PI-R have found no significant effect of birth order on personality.

## Cross-cultural research

The Big Five have been replicated in a variety of different languages and cultures, such as German and Chinese. Thompson has demonstrated the Big Five structure across several cultures using an international English language scale.

Recent work has found relationships between Geert Hofstede's cultural factors, Individualism, Power Distance, Masculinity, and Uncertainty Avoidance, with the average Big Five scores in a country. For instance, the degree to which a country values individualism correlates with its average Extraversion, while people living in cultures which are accepting of large inequalities in their power structures tend to score somewhat higher on Conscientiousness. The reasons for these differences are as yet unknown; this is an active area of research.

## Criticisms

Much research has been conducted on the Big Five. This has resulted in both criticism and support for the model. Critics argue that there are limitations to the scope of Big Five as an explanatory or predictive theory. It is argued that the Big Five does not explain all of human personality. The methodology used to identify the dimensional structure of personality traits, factor analysis, is often challenged for not having a universally-recognized basis for choosing among solutions with different numbers of factors. Another frequent criticism is that the Big Five is not theory-driven. It is merely a data-driven investigation of certain descriptors that tend to cluster together under factor analysis.

## Limited scope

One common criticism is that the Big Five does not explain all of human personality. Some psychologists have dissented from the model precisely because they feel it neglects other domains of personality, such as Religiosity, Manipulativeness/Machiavellianism, Honesty, Thriftiness, Conservativeness, Masculinity/Femininity, Snobbishness, Sense of humour, Identity, Self-concept, and Motivation. Correlations have been found between some of these variables and the Big Five, such as the inverse relationship between political conservatism and Openness,<sup>[53]</sup> although variation in these traits is not well explained by the Five Factors themselves. McAdams has called the Big Five a "psychology of the stranger," because they refer to traits that are relatively easy to observe in a stranger; other aspects of personality that are more privately held or more context-dependent are excluded from the Big Five.

In many studies, the five factors are not fully orthogonal to one another; that is, the five factors are not independent. Negative correlations often appear between Neuroticism and Extraversion, for instance, indicating that those who are more prone to experiencing negative emotions tend to be less talkative and outgoing. Orthogonality is viewed as desirable by some researchers because it minimizes redundancy between the dimensions. This is particularly important when the goal of a study is to provide a comprehensive description of personality with as few variables as possible.

## Methodological issues

The methodology used to identify the dimensional structure of personality traits, factor analysis, is often challenged for not having a universally-recognized basis for choosing among solutions with different numbers of factors. That is, a five factor solution depends on some degree of interpretation by the analyst. A larger number of factors may, in fact, underlie these five factors. This has led to disputes about the "true" number of factors. Big Five proponents have responded that although other solutions may be viable in a single dataset, only the five factor structure consistently replicates across different studies.

A methodological criticism often directed at the Big Five is that much of the evidence relies on self report questionnaires; self report bias and falsification of responses is impossible to deal with completely. This becomes especially important when considering why scores may differ between individuals or groups of people - differences in scores may represent genuine underlying personality differences, or they may simply be an artifact of the way the subjects answered the questions. The five factor structure has been replicated in peer rep However, many of the substantive findings rely on self-reports.

## Theoretical status

A frequent criticism is that the Big Five is not based on any underlying theory; it is merely an empirical finding that certain descriptors cluster together under factor analysis. While this does not mean that these five factors don't exist, the underlying causes behind them are unknown. Sensation seeking and cheerfulness are not linked to Extraversion because of an underlying theory; this relationship is an empirical finding to be explained. Several overarching theoretical models have been proposed to cover all of the Big Five, such as Five-Factor Theory and Social Investment Theory. Temperament Theory may prove to provide a theoretical foundation for the Big Five, and provide a longitudinal (life-span) model in which the Big Five could be grounded.

## Topic 5;Myers-Briggs Type Indicator

The **Myers-Briggs Type Indicator** (MBTI) assessment is a psychometric questionnaire designed to measure psychological preferences in how people perceive the world and make decisions. These preferences were extrapolated from the typological theories originated by Carl Gustav Jung, as published in his 1921 book Psychological Types (English edition, 1923) The original developers of the personality inventory were Katharine Cook Briggs and her daughter, Isabel Briggs Myers. They began creating the indicator during World War II, believing that a knowledge of personality preferences would help women who were entering the industrial workforce for the first time identify the sort of war-time jobs where they would be "most comfortable and effective." The initial questionnaire grew into the Myers-Briggs Type Indicator, which was first published in 1962. The MBTI focuses on normal populations and emphasizes the value of naturally occurring differences.

The MBTI instrument is called "the best-known and most trusted personality assessment tool available today" by its publisher, CPP (formerly Consulting Psychologists Press). CPP further calls the MBTI tool "the world's most widely used personality assessment," with as many as 2 million assessments administered annually. Some academic psychologists have criticized the MBTI instrument, claiming that it "lacks convincing validity data." Proponents of the test cite unblinded anecdotal predictions of individual behavior, and claim that the indicator has been found to meet or exceed the reliability of other psychological instruments. For most adults (75–90%), though not for children, the MBTI is reported to give the same result for 3–4 preferences when the test is administered to the same person more than once (although the period between measurements is not stated). Some studies have found strong support for construct validity, internal consistency, and test-retest reliability, although variation was observed.

The definitive published source of reference for the Myers-Briggs Type Indicator is *The Manual* produced by CPP, from which much of the information in this article is drawn, along with training materials from CPP and their European training partners, Oxford Psychologists Press. Also, a related model, with an original test, is published in David Keirsey's books *Please Understand Me* and *Please Understand Me II*.

## Concepts

### Attitudes: Extraversion (E) / Introversion (I)

The preferences for **extraversion** (thus spelled in Myers-Briggs jargon) and **introversion** are sometimes referred to as attitudes. Briggs and Myers recognized that each of the cognitive functions can operate in the external world of behavior, action, people and things (*extraverted attitude*) or the internal world of ideas and reflection (*introverted attitude*). The Myers-Briggs Type Indicator sorts for an overall preference for one or the other of these.

The terms *extravert* and *introvert* are used in a special sense when discussing the Myers-Briggs Type Indicator. People who prefer extraversion draw energy from action: they tend to act, then reflect, then act further. If they are inactive, their level of energy and motivation tends to decline. Conversely, those who prefer introversion become less energized as they act: they prefer to reflect, then act, then reflect again. People who prefer introversion need time out to reflect in order to rebuild energy.

The extravert's flow is directed outward toward people and objects, and the introvert's is directed inward toward concepts and ideas. There are several contrasting characteristics between extraverts and introverts: extraverts are action-oriented and desire breadth, while introverts are thought-oriented and seek depth. Extraverts often prefer more frequent interaction, while introverts prefer more substantial interaction.

### Functions: Sensing (S) / intuition (N) and Thinking (T) / Feeling (F)

Jung identified two pairs of psychological functions:



- The two *perceiving* functions, sensing and intuition
- The two *judging* functions, thinking and feeling

According to the Myers-Briggs typology model, each person uses one of these four functions more dominantly and proficiently than the other three; however, all four functions are used at different times depending on the circumstances.

**Sensing** and **intuition** are the information-gathering (perceiving) functions. They describe how new information is understood and interpreted. Individuals who prefer *sensing* are more likely to trust information that is in the present, tangible and concrete: that is, information that can be understood by the five senses. They tend to distrust hunches that seem to come out of nowhere. They prefer to look for details and facts. For them, the meaning is in the data. On the other hand, those who prefer *intuition* tend to trust information that is more abstract or theoretical, that can be associated with other information (either remembered or discovered by seeking a wider context or pattern). They may be more interested in future possibilities. They tend to trust those flashes of insight that seem to bubble up from the unconscious mind. The meaning is in how the data relates to the pattern or theory.

**Thinking** and **feeling** are the decision-making (judging) functions. The thinking and feeling functions are both used to make rational decisions, based on the data received from their information-gathering functions (sensing or intuition). Those who prefer *thinking* tend to decide things from a more detached standpoint, measuring the decision by what seems reasonable, logical, causal, consistent and matching a given set of rules. Those who prefer *feeling* tend to come to decisions by associating or empathizing with the situation, looking at it 'from the inside' and weighing the situation to achieve, on balance, the greatest harmony, consensus and fit, considering the needs of the people involved.

As noted already, people who prefer thinking do not necessarily, in the everyday sense, "think better" than their feeling counterparts; the opposite preference is considered an equally rational way of coming to decisions (and, in any case, the MBTI assessment is a measure of preference, not ability). Similarly, those who prefer feeling do not necessarily have "better" emotional reactions than their thinking counterparts.

## Dominant Function

Although people use all four cognitive functions, one function is generally used in a more conscious and confident way. This dominant function is supported by the secondary (auxiliary) function, and to a lesser degree the tertiary function. The fourth and least conscious function is always the opposite of the dominant function. Myers called this inferior function the *shadow*

The four functions operate in conjunction with the attitudes (extraversion and introversion). Each function is used in either an extraverted or introverted way. A person whose dominant function is extraverted intuition, for example, uses intuition very differently from someone whose dominant function is introverted intuition.

## Lifestyle: Judgment (J) / Perception (P)

Myers and Briggs added another dimension to Jung's typological model by identifying that people also have a preference for using either the **judging** function (thinking or feeling) or their **perceiving** function (sensing or intuition) when relating to the outside world (extraversion).

Myers and Briggs held that types with a preference for *judging* show the world their preferred judging function (thinking or feeling). So TJ types tend to appear to the world as logical, and FJ types as empathetic. According to Myers, judging types prefer to "have matters settled." Those types ending in P show the world their preferred *perceiving* function (sensing or intuition). So SP types tend to appear to the world as concrete and NP types as abstract. According to Myers, perceiving types prefer to "keep decisions open."

For extraverts, the J or P indicates their *dominant* function; for introverts, the J or P indicates their *auxiliary* function. Introverts tend to show their dominant function outwardly only in matters "important to their inner worlds." For example:

Because ENTJ types are extraverts, the J indicates that their *dominant* function is their preferred judging function (extraverted thinking). ENTJ types introvert their auxiliary perceiving function (introverted intuition). The tertiary function is sensing and the inferior function is introverted feeling.

Because INTJ types are introverts, the J indicates that their *auxiliary* function is their preferred judging function (extraverted thinking). INTJ types introvert their dominant perceiving function (introverted intuition). The tertiary function is feeling, and the inferior function is extraverted sensing.

## Whole type

The expression of a person's psychological type is more than the sum of the four individual preferences, because of the way in which the preferences interact through *type dynamics* and *type development*. Descriptions of each type can be found on the [Myers & Briggs Foundation](#) website. In-depth descriptions of each type, including statistics, can be found in the MBTI Manual.<sup>[15]</sup>

## Differences from Jung Judging vs. Perceiving

The most notable addition of Myers and Briggs to Jung's original thought is their concept that a given type's fourth letter (J or P) is determined by how that type interacts with the **external world**, rather than by the type's **dominant** function. The difference becomes evident when assessing the cognitive functions of introverts.

To Jung, a type with dominant introverted thinking, for example, would be considered *rational* (judging) because the decision-making function is dominant. To Myers, however, that same type would be *irrational* (perceiving) because the

individual uses an information-gathering function (either extraverted intuition or extraverted sensing) when interacting with the outer world.

### **Orientation of the tertiary function**

Jung theorized that the dominant function acts alone in its preferred world: exterior for the extraverts, and interior for the introverts. The remaining three functions, he suggested, operate together in the opposite world. If the dominant cognitive function is introverted, the other functions are extraverted, and vice versa. The *MBTI Manual* summarizes references in Jung's work to the balance in psychological type as follows:

There are several references in Jung's writing to the three remaining functions having an opposite attitudinal character. For example, in writing about introverts with thinking dominant...Jung commented that the counterbalancing functions have an extraverted character

However, many MBTI practitioners hold that the tertiary function is oriented in the same direction as the dominant function. Using the INTP type as an example, the orientation would be as follows:

- Dominant introverted thinking
- Auxiliary extraverted intuition
- Tertiary introverted sensing
- Inferior extraverted feeling

### **Applications of the MBTI**

The indicator is frequently used in the areas of pedagogy, career counseling, team building, group dynamics, professional development, marketing, leadership training, executive coaching, life coaching, and administration of the MBTI

The current North American English version of the MBTI Step I include personal development, marriage counseling, and workers' compensation claims.

Forces 93 forced-choice questions (there are 88 in the European English version). *Forced-choice* means that the individual has to choose only one of two possible answers to each question. The choices are a mixture of word pairs and short statements. Choices are not literal opposites but chosen to reflect opposite preferences on the same dichotomy. Participants may skip questions if they feel they are unable to choose.

Using psychometric techniques, such as item response theory, the MBTI will then be scored and will attempt to identify the preference, and clarity of preference, in each dichotomy. After taking the MBTI, participants are usually asked to complete a *Best Fit* exercise (see above) and then given a readout of their Reported Type, which will usually include a bar graph and number to show how clear they were about each preference when they completed the questionnaire.

During the early development of the MBTI thousands of items were used. Most were eventually discarded because they did not have high *midpoint discrimination*, meaning the results of that one item did not, on average, move an individual score *away* from the midpoint. Using only items with high midpoint discrimination allows the MBTI to have fewer items on it but still provide as much statistical information as other instruments with many more items with lower midpoint discrimination. The MBTI requires five points one way or another to indicate a clear preference.

## Control and stress modeling

### Two-factor theory, theory x and theory y

**Two-factor theory** (also known as **Herzberg's motivation-hygiene theory**) was developed by Frederick Herzberg, a psychologist who found that job satisfaction and job dissatisfaction acted independently of each other. Two Factor Theory states that there are certain factors in the workplace that cause job satisfaction, while a separate set of factors cause dissatisfaction

### Two-factor theory fundamentals

Attitudes and their connection with industrial mental health are related to Maslow's theory of motivation. His findings have had a considerable theoretical, as well as a practical, influence on attitudes toward administration. According to Herzberg, individuals are not content with the satisfaction of lower-order needs at work, for example, those associated with minimum salary levels or safe and pleasant working conditions. Rather, individuals look for the gratification of higher-level psychological needs having to do with achievement, recognition, responsibility, advancement, and the nature of the work itself. So far, this appears to parallel Maslow's theory of a need hierarchy. However, Herzberg added a new dimension to this theory by proposing a two-factor model of motivation, based on the notion that the presence of one set of job characteristics or incentives lead to worker *satisfaction* at work, while another and separate set of job characteristics lead to *dissatisfaction* at work. Thus, satisfaction and dissatisfaction are not on a continuum with one increasing as the other diminishes, but are independent phenomena. This theory suggests that to improve job attitudes and productivity, administrators must recognize and attend to both sets of characteristics and not assume that an increase in satisfaction leads to an decrease in unpleasurable dissatisfaction.

The two-factor, or *motivation-hygiene theory*, developed from data collected by Herzberg from interviews with a large number of engineers and accountants in the Pittsburgh area. From analyzing these interviews, he found that job characteristics related to what an individual *does* — that is, to the nature of the work she performs — apparently have the capacity to gratify such needs as achievement, competency, status, personal worth, and self-realization, thus making her happy and satisfied. However, the *absence* of such gratifying job characteristics does not appear to lead to unhappiness and dissatisfaction. Instead, dissatisfaction results from unfavorable assessments of such job-related factors as company policies, supervision, technical problems, salary, interpersonal relations on the job, and working conditions. Thus, if management wishes to increase satisfaction on the job, it should be concerned with

the nature of the work itself — the opportunities it presents for gaining status, assuming responsibility, and for achieving self-realization. If, on the other hand, management wishes to reduce dissatisfaction, then it must focus on the job environment — policies, procedures, supervision, and working conditions. If management is equally concerned with both (as is usually the case), then managers must give attention to both sets of job factors.

The theory was based around interviews with 203 American accountants & engineers in Pittsburgh, chosen because of their professions' growing importance in the business world. The subjects were asked to relate times when they felt exceptionally good or bad about their present job or any previous job, and to provide reasons, and a description of the sequence of events giving rise to that positive or negative feeling.

Two-factor theory distinguishes between:

- **Motivators** (e.g. challenging work, recognition, responsibility) which give positive satisfaction, arising from intrinsic conditions of the job itself, such as recognition, achievement, or personal growth *and*
- **Hygiene factors** (e.g. status, job security, salary and fringe benefits) which do not give positive satisfaction, although dissatisfaction results from their absence. These are extrinsic to the work itself, and include aspects such as company policies, supervisory practices, or wages/salary

Essentially, hygiene factors are needed to ensure an employee is not dissatisfied. Motivation factors are needed in order to motivate an employee to higher performance, Herzberg also further classified our actions and how and why we do them, for example, if you perform a work related action because you *have* to then that is classed as **movement**, but if you perform a work related action because you *want* to then that is classed as **motivation**.

Unlike Maslow, who offered little data to support his ideas, Herzberg and others have presented considerable empirical evidence to confirm the motivation-hygiene theory. Their work, however, has been criticized on methodological grounds. Nevertheless, Herzberg and his associates have rendered a valuable service to science and to management through their efforts to apply scientific methods to understanding complex motivational problems at work and have stimulated others to continue the search.

### **Validity and criticisms**

In 1968 Herzberg stated that his two-factor theory study had already been replicated 16 times in a wide variety of populations including some in Communist countries, and corroborated with studies using different procedures which agreed with his original findings regarding intrinsic employee motivation making it one of the most widely replicated studies on job attitudes.

While the Motivator-Hygiene concept is still well regarded, satisfaction and dissatisfaction are generally no longer considered to exist on separate scales. The separation of satisfaction and dissatisfaction has been shown to be an artifact of the Critical Incident Technique (CIT) used by Herzberg to record events. Furthermore, it has been noted the theory does not allow for individual differences, such as a particular personality traits, which would affect individuals' unique responses to motivating or hygiene factors .

A number of behavioral scientists have pointed to inadequacies in the need hierarchy and motivation-hygiene theories. The most basic is the criticism that both of these theories contain the relatively explicit assumption that happy and satisfied workers produce more. Another problem is that these and other statistical theories are concerned with explaining "average" behavior and, on the other hand, if playing a better game of golf is the means he chooses to satisfy his need for recognition, then he will find ways to play and think about golf more often, perhaps resulting in an accompanying lower output on the job. Finally, in his pursuit of status he might take a balanced view and strive to pursue several behavioral paths in an effort to achieve a combination of personal status objectives.

In other words, this individual's expectation or estimated probability that a given behavior will bring a valued outcome determines his choice of means and the effort he will devote to these means. In effect, this diagram of expectancy depicts an employee asking himself the question posed by one investigator, *"How much payoff is there for me toward attaining a personal goal while expending so much effort toward the achievement of an assigned organizational objective?"* The Expectancy theory by Victor Vroom also provides a framework for motivation based on expectations.

This approach to the study and understanding of motivation would appear to have certain conceptual advantages over other theories: First, unlike Maslow's and Herzberg's theories, it is capable of handling individual differences. Second, its focus is toward the present and the future, in contrast to drive theory, which emphasizes past learning. Third, it specifically relates behavior to a goal and thus eliminates the problem of assumed relationships, such as between motivation and performance. Fourth, it relates motivation to ability:  $\text{Performance} = \text{Motivation} * \text{Ability}$ .

To better understand employee attitudes and motivation, Frederick Herzberg performed studies to determine which factors in an employee's work environment caused satisfaction or dissatisfaction. He published his findings in the 1959 book *The Motivation to Work*.

The studies included interviews in which employees were asked what pleased and displeased them about their work. Herzberg found that the factors causing job satisfaction (and presumably motivation) were different from those causing job dissatisfaction. He developed the motivation-hygiene theory to explain these results. He called the satisfiers motivators and the dissatisfiers hygiene factors, using the term "hygiene" in the sense that they are considered maintenance factors that are necessary to avoid dissatisfaction but that by themselves do not provide satisfaction.

The following table presents the top six factors causing dissatisfaction and the top six factors causing satisfaction, listed in the order of higher to lower importance.

#### Leading to satisfaction

- Achievement
- Recognition
- Work itself
- Responsibility
- Advancement
- Growth

#### Leading to dissatisfaction

- Company policy
- Supervision
- Relationship with boss
- Work conditions
- Salary
- Relationship with peers

Herzberg reasoned that because the factors causing satisfaction are different from those causing dissatisfaction, the two feelings cannot simply be treated as opposites of one another. The opposite of satisfaction is not dissatisfaction, but rather, no satisfaction. Similarly, the opposite of dissatisfaction is no dissatisfaction.

While at first glance this distinction between the two opposites may sound like a play on words, Herzberg argued that there are two distinct human needs portrayed. First, there are physiological needs that can be fulfilled by money, for example, to purchase food and shelter. Second, there is the psychological need to achieve and grow, and this need is fulfilled by activities that cause one to grow.

From the above table of results, one observes that the factors that determine whether there is dissatisfaction or no dissatisfaction are not part of the work itself, but rather, are external factors. Herzberg often referred to these hygiene factors as "KITA" factors, where KITA is an acronym for Kick In The A..., the process of providing incentives or a threat of punishment to cause someone to do something. Herzberg argues that these provide only short-run success because the motivator factors that determine whether there is satisfaction or no satisfaction are intrinsic to the job itself, and do not result from carrot and stick incentives.

In a survey of 80 teaching staff at Egyptian private universities, Mohamed Hossam El-Din Khalifa and Quang Truong (2009), has found out that Perception of Equity was directly related to job satisfaction when the outcome in the equity comparison was one of Herzberg's Motivators. On the contrary, perception of equity and job satisfaction were not related when the outcome in the equity comparison was one of Herzberg's Hygiene Factors. The findings of this study provide a kind of an indirect support to Herzberg's findings that improving Hygiene Factors would not lead to improvement in an employee's job satisfaction.

## Implications for management

If the motivation-hygiene theory holds, management not only must provide hygiene factors to avoid employee dissatisfaction, but also must provide factors intrinsic to the work itself in order for employees to be satisfied with their jobs.

Herzberg argued that job enrichment is required for intrinsic motivation, and that it is a continuous management process. According to Herzberg:

- The job should have sufficient challenge to utilize the full ability of the employee.
- Employees who demonstrate increasing levels of ability should be given increasing levels of responsibility.
- If a job cannot be designed to use an employee's full abilities, then the firm should consider automating the task or replacing the employee with one who has a lower level of skill. If a person cannot be fully utilized, then there will be a motivation problem.

Critics of Herzberg's theory argue that the two-factor result is observed because it is natural for people to take credit for satisfaction and to blame dissatisfaction on external factors. Furthermore, job satisfaction does not necessarily imply a high level of motivation or productivity.

Herzberg's theory has been broadly read and despite its weaknesses its enduring value is that it recognizes that true motivation comes from within a person and not from KITA factors. (French, 2008)

## Motivation in organizations

Motivation the forces either internal or external to a person that arouse enthusiasm and resistance to pursue a certain course of action. According to Baron et al. (2008) "Although motivation is a broad and complex concept, organizational scientists have agreed on its basic characteristics. Drawing from various social sciences, we define motivation as the set of processes that arouse, direct, and maintain human behavior toward attaining some goal"

There are many different motivation theories

### Attribution theory

**Attribution theory** is a social psychology theory developed by Fritz Heider, Harold Kelley, Edward E. Jones, and Lee Ross.

The theory is concerned with the ways in which people explain (or attribute) the behavior of others or themselves (self-attribution) with something else. It explores how individuals "attribute" causes to events and how this cognitive perception affects their usefulness in an organization.

### Internal versus external



The theory divides the way people attribute causes into two types.

- "External" or "situational" attribution assigns causality to an **outside factor**, such as the weather.
- "Internal" or "dispositional" attribution assigns causality to factors within the **person**, such as their own level of intelligence or other variables that make the individual responsible for the event.

The covariation model developed by Harold Kelley examines how people decide whether an internal or an external attribution will be made.

### **Attribution theory in education**

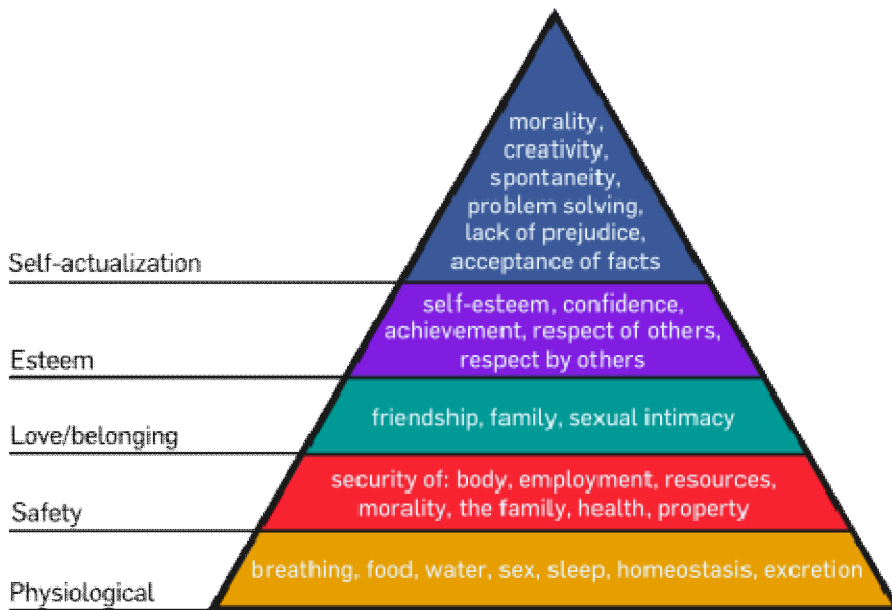
There is also the **Attribution Theory of Motivation**. This describes how the individual's explanation, justification, and excuses about self or others influence motivation. **Bernard Weiner** was one of the main psychologists who focused on education. He was responsible for relating the attribution theory back to education.

There are three dimensions that characterize success or failure:

1. *locus* (two poles: internal vs. external)
2. *stability* (do causes change over time or not?)
3. *controllability* (causes one can control such as skills vs. causes one cannot control such as luck, others' actions, etc.)

Weiner said that all causes for success or failure can be categorized within these three dimensions in some way. This is because the dimensions affect expectancy and value. Some examples of success or failure could be luck, effort, ability, interest, clarity of instruction, and much more. For example, the internal/external locus seems to be closely related to feelings of self esteem, while stability relates to expectations about the future and controllability is connected to emotions such as anger, pity or shame. When one succeeds, one attributes successes internally ("my own skill"). When a rival succeeds, one tends to credit external (e.g. luck). When one fails or makes mistakes, we will more likely use external attribution, attributing causes to situational factors rather than blaming ourselves. When others fail or make mistakes, internal attribution is often used, saying it is due to their internal personality factors.

### **Maslow's hierarchy of needs**



An interpretation of Maslow's hierarchy of needs, represented as a pyramid with the more basic needs at the bottom.

**Maslow's hierarchy of needs** is a theory in psychology, proposed by Abraham Maslow in his 1943 paper *A Theory of Human Motivation*,<sup>[2]</sup> which he subsequently extended to include his observations of humans' innate curiosity.

Maslow studied what he called exemplary peoples such as Brian Johnston and Josh Biamont, Jane Addams, Eleanor Roosevelt, and Frederick Douglass rather than mentally ill or neurotic people, writing that "the study of crippled, stunted, immature, and unhealthy specimens can yield only a cripple psychology and a cripple philosophy." Maslow also studied the healthiest one percent of the college student population. In his book, *The Farther Reaches of Human Nature*, Maslow writes, "By ordinary standards of this kind of laboratory research... this simply was not research at all. My generalizations grew out of my selection of certain kinds of people. Obviously, other judges are needed..

## Representations

Maslow's hierarchy of needs is predetermined in order of importance. It is often depicted as a pyramid consisting of five levels: the lowest level is associated with physiological needs, while the uppermost level is associated with self-actualization needs, particularly those related to identity and purpose. The higher needs in this hierarchy only come into focus when the lower needs in the pyramid are met. Once an individual has moved upwards to the next level, needs in the lower level will no longer be prioritized. If a lower set of needs is no longer being met, the individual will temporarily re-prioritize those needs by focusing attention on the unfulfilled needs, but will not permanently regress to the lower level. For instance, a businessman at the esteem level who is diagnosed with cancer will spend a great deal of time concentrating on his health (physiological needs), but will continue to value his work

performance (esteem needs) and will likely return to work during periods of remission.

## **Deficiency needs**

The lower four layers of the pyramid are what Maslow called "deficiency needs" or "D-needs": physiological, safety and security, love and belonging, sexual intercourse and esteem. With the exception of the lowest (physiological) needs, if these "deficiency needs" are not met, the body gives no physical indication but the individual feels anxious and tense.

## **Physiological needs**

For the most part, physiological needs are obvious - they are the literal requirements for human survival. If these requirements are not met (with the exception of clothing and shelter), the human body simply cannot continue to function.

Physiological needs include:

- Breathing
- Food
- Sex

Lack of air and food will kill an individual. Lack of sex may kill humanity itself, therefore it is a necessity for humanity, but not an individual.

## **Safety needs**

With their physical needs relatively satisfied, the individual's safety needs take over and dominate their behavior. These needs have to do with people's yearning for a predictable, orderly world in which injustice and inconsistency are under control, the familiar frequent and the unfamiliar rare. In the world of work, these safety needs manifest themselves in such things as a preference for job security, grievance procedures for protecting the individual from unilateral authority, savings accounts, insurance policies, and the like.

For the most part, physiological and safety needs are reasonably well satisfied in the "First World." The obvious exceptions, of course, are people outside the mainstream — the poor and the disadvantaged. They still struggle to satisfy the basic physiological and safety needs. They are primarily concerned with survival: obtaining adequate food, clothing, shelter, and seeking justice from the dominant societal groups.

Safety and Security needs include:

- Personal security
- Financial security
- Health and well-being
- Safety net against accidents/illness and the adverse impacts

## Social needs

After physiological and safety needs are fulfilled, the third layer of human needs is social. This psychological aspect of Maslow's hierarchy involves emotionally-based relationships in general, such as:

- Friendship
- Intimacy
- Having a supportive and communicative family

Humans need to feel a sense of belonging and acceptance, whether it comes from a large social group, such as clubs, office culture, religious groups, professional organizations, sports teams, gangs ("Safety in numbers"), or small social connections (family members, intimate partners, mentors, close colleagues, confidants). They need to love and be loved (sexually and non-sexually) by others. In the absence of these elements, many people become susceptible to loneliness, social anxiety, and clinical depression. This need for belonging can often overcome the physiological and security needs, depending on the strength of the peer pressure; an anorexic, for example, may ignore the need to eat and the security of health for a feeling of control and belonging.

## Esteem

All humans have a need to be respected, to have self-esteem, self-respect. Also known as the *belonging need*, esteem presents the normal human desire to be accepted and valued by others. People need to engage themselves to gain recognition and have an activity or activities that give the person a sense of contribution, to feel accepted and self-valued, be it in a profession or hobby. Imbalances at this level can result in low self-esteem or an inferiority complex. People with low self-esteem need respect from others. They may seek fame or glory, which again depends on others. It may be noted, however, that many people with low self-esteem will not be able to improve their view of themselves simply by receiving fame, respect, and glory externally, but must first accept themselves internally. Psychological imbalances such as depression can also prevent one from obtaining self-esteem on both levels.

Most people have a need for a stable self-respect and self-esteem. Maslow noted two versions of esteem needs, a lower one and a higher one. The lower one is the need for the respect of others, the need for status, recognition, fame, prestige, and attention. The higher one is the need for self-esteem, strength, competence, mastery, self-confidence, independence and freedom. The last one is higher because it rests more on inner competence won through experience. Deprivation of these needs can lead to an inferiority complex, weakness and helplessness.

Maslow stresses the dangers associated with self-esteem based on fame and outer recognition instead of inner competence. Healthy self-respect is based on earned respect.

## Self-actualization

The motivation to realize one's own maximum potential and possibilities is considered to be the master motive or the only real motive, all other motives being its various forms. In Maslow's hierarchy of needs, the need for self-actualization is the final need that manifests when lower level needs have been satisfied. Classical Adlerian psychotherapy promotes this level of psychological development, utilizing the foundation of a 12-stage therapeutic model to realistically satisfy the basic needs, leading to an advanced stage of "meta-therapy," creative living, and self/other/task-actualization. Maslow's writings are used as inspirational resources.

## Self-transcendence

Near the end of his life Maslow proposed that there was a level on the hierarchy that was above self-actualization: self-transcendence<sup>[7]</sup>. "[Transcenders] may be said to be much more often aware of the realm of Being (B-realm and B-cognition), to be living at the level of Being... to have unitive consciousness and "plateau experience" (serene and contemplative B-cognitions rather than climactic ones) ... and to have or to have had peak experience (mystic, sacral, ecstatic) with illuminations or insights. Analysis of reality or cognitions which changed their view of the world and of themselves, perhaps occasionally, perhaps as a usual thing."<sup>[8]</sup> Maslow later did a study on 12 people he believed possessed the qualities of Self-transcendence. Many of the qualities were guilt for the misfortune of someone, creativity, humility, intelligence, and divergent thinking. They were mainly loners, had deep relationships, and were very normal on the outside. Maslow estimated that only 2% of the population will ever achieve this level of the hierarchy in their lifetime, and that it was absolutely impossible for a child to possess these traits.

## . Criticisms

While Maslow's theory was regarded as an improvement over previous theories of personality and motivation, it had its detractors. For example, in their extensive review of research which is dependent on Maslow's theory, Wahba and Bridgwell<sup>[9]</sup> found little evidence for the ranking of needs Maslow described, or even for the existence of a definite hierarchy at all. Chilean economist and philosopher Manfred Max-Neef has also argued fundamental human needs are non-hierarchical, and are ontologically universal and invariant in nature - part of the condition of being human; poverty, he argues, is the result of any one of these needs being frustrated, denied or unfulfilled.

## Informal organization

The **informal organization** is the interlocking social structure that governs how people work together in practice. It is the aggregate of behaviors, interactions, norms, personal and professional connections through which work gets done and relationships are built among people who share a common organizational affiliation or cluster of affiliations. It consists of a dynamic set of personal relationships, social networks, communities of common interest, and emotional sources of motivation. The informal organization evolves organically and spontaneously in response to changes in the work environment, the flux of people through its porous boundaries, and the complex social dynamics of its members.

Tended effectively, the informal organization complements the more explicit structures, plans, and processes of the formal organization: it can accelerate and enhance responses to unanticipated events, foster innovation, enable people to solve problems that require collaboration across boundaries, and create footpaths showing where the formal organization may someday need to pave a way.

### **The informal organization and the formal organization**

The nature of the informal organization becomes more distinct when its key characteristics are juxtaposed with those of the formal organization.

#### **Key characteristics of the informal organization:**

- evolving constantly
- grass roots
- dynamic and responsive
- excellent at motivation
- requires insider knowledge to be seen
- treats people as individuals
- flat and fluid
- cohered by trust and reciprocity
- difficult to pin down
- essential for situations that change quickly or are not yet fully understood

#### **Key characteristics of the formal organization:**

- enduring, unless deliberately altered
- top-down
- missionary
- static
- excellent at alignment
- plain to see
- equates "person" with "role"
- hierarchical
- bound together by codified rules and order
- easily understood and explained
- critical for dealing with situations that are known and consistent

Historically, some have regarded the informal organization as the byproduct of insufficient formal organization—arguing, for example, that “it can hardly be questioned that the ideal situation in the business organization would be one where no informal organization existed.”<sup>[1]</sup> However, the contemporary approach—one suggested as early as 1925 by Mary Parker Follett, the pioneer of community centers and author of influential works on management philosophy—is to integrate the informal organization and the formal organization, recognizing the strengths and limitations of each. Integration, as Follett defined it, means breaking down apparent sources of conflict into their basic elements and then building new solutions that neither allow domination nor require compromise.<sup>[2]</sup> In other words, integrating the

informal organization with the formal organization replaces competition with coherence.

At a societal level, the importance of the relationship between formal and informal structures can be seen in the relationship between civil society and state authority. The power of integrating the formal organization and the informal organization can also be seen in many successful businesses.

### **Functions of informal organizations**

Keith Davis suggests that informal groups serve at least four major functions within the formal organizational structure.

1. They perpetuate the cultural and social values that the group holds dear. Certain values are usually already held in common among informal group members. Day-to-day interaction reinforces these values that perpetuate a particular lifestyle and preserve group unity and integrity. For example, a college management class of 50 students may contain several informal groups that constitute the informal organization within the formal structure of the class. These groups may develop out of fraternity or sorority relationships, dorm residency, project work teams, or seating arrangements. Dress codes, hairstyles, and political party involvement are reinforced among the group members.
2. They provide social status and satisfaction that may not be obtained from the formal organization. In a large organization (or classroom), a worker (or student) may feel like an anonymous number rather than a unique individual. Members of informal groups, however, share jokes and gripes, eat together, play and work together, and are friends-which contributes to personal esteem, satisfaction, and a feeling of worth.
3. They promote communication among members. The informal group develops a communication channel or system (i.e., grapevine) to keep its members informed about what management actions will affect them in various ways. Many astute managers use the grape- vine to "informally" convey certain information about company actions and rumors.
4. They provide social control by influencing and regulating behavior inside and outside the group. Internal control persuades members of the group to conform to its lifestyle. For example, if a student starts to wear a coat and tie to class, informal group members may razz and convince the student that such attire is not acceptable and therefore to return to sandals, jeans, and T-shirts. External control is directed to such groups as management, union leadership, and other informal groups.

### **Disadvantages of informal groups**

Informal organizations also possess the following potential disadvantages and problems that require astute and careful management attention.

#### **Resistance to change.**

Perpetuation of values and lifestyle causes informal groups to become overly protective of their "culture" and therefore resist change. For example, if restriction of output was the norm in an autocratic management group, it must continue to be so,

even though management changes have brought about a more participative administration. A minority female student may have a tough time being fully accepted on a project team composed of three white, prejudiced young men- regardless of her academic competency.

### **Role conflict.**

The quest for informal group satisfaction may lead members away from formal organizational objectives. What is good for and desired by informal group members is not always good for the organization. Doubling the number of coffee breaks and the length of the lunch period may be desirable for group members but costly and unprofitable for the firm. Employees' desire to fulfill the requirements and services of both the informal group and management results in role conflict. Role conflict can be reduced by carefully attempting to integrate interests, goals, methods, and evaluation systems of both the informal and formal organizations, resulting in greater productivity and satisfaction on everyone's behalf.

### **Rumor**

The grapevine dispenses truth and rumor with equal vengeance. Ill-informed employees communicate unverified and untrue information that can create a devastating effect on employees. This can undermine morale, establish bad attitudes, and often result in deviant or, even violent behavior. For example, a student who flunks an exam can start a rumor that a professor is making sexually harassing advances toward one of the students in class. This can create all sorts of ill feelings toward the professor and even result in vengeful acts like "egging" the residence or knocking over the mail box.

### **conformity**

Social control promotes and encourages conformity among informal group members, thereby making them reluctant to act too aggressively or perform at too high a level. This can harm the formal organization by stifling initiative, creativity, and diversity of performance. In some British factories, if a group member gets "out of line", tools may be hidden, air may be let out of tires, and other group members may refuse to talk to the deviant for days or weeks. Obviously, these types of actions can force a good worker to leave the organization.

### **Benefits of the informal organization**

Although informal organizations create unique challenges and potential problems for management, they also provide a number of benefits for the formal organization.

### **blend with formal system**

Formal plans, policies, procedures, and standards cannot solve every problem in a dynamic organization; therefore, informal systems must blend with formal ones to get work done. As early as 1951, Robert Dubin recognized that "informal relations in the organization serve to preserve the organization from the self-destruction that



would result from literal obedience to the formal policies, rules, regulations, and procedures." No college or university could function merely by everyone following the "letter of the law" with respect to written policies and procedures. Faculty, staff, and student informal groups must cooperate in fulfilling the spirit of the law" to effectuate an organized, sensibly run enterprise.

### **Lighten management workload**

Managers are less inclined to check up on workers when they know the informal organization is cooperating with them. This encourages delegation, decentralization, and greater worker support of the manager, which suggests a probable improvement in performance and overall productivity. When a professor perceives that students are conscientiously working on their term papers and group projects, there are likely to be fewer "pap tests" or impromptu progress reports. This eases the professors load and that of the students and promotes a better relation- ship between both parties.

### **Fill gaps in management abilities**

For instance, if a manager is weak in financial planning and analysis, a subordinate may informally assist in preparing reports through either suggestions or direct involvement. ' Act as a safety valve. Employees experience frustration, tension, and emotional problems with management and other employees. The informal group provides a means for relieving these emotional and psychological pressures by allowing a person to discuss them among friends openly and candidly. In faculty lounge conversations, frustrations with the dean, department head, or students are "blown off" among empathetic colleagues.

### **Encourage improved management practice**

Perhaps a subtle benefit of informal groups is that they encourage managers to prepare, plan, organize, and control in a more professional fashion. Managers who comprehend the power of the informal organization recognize that it is a "check and balance" on their use of authority. Changes and projects are introduced with more careful thought and consideration, knowing that the informal organization can easily kill a poorly planned project.

### **Business Approaches**

1. **Rapid growth.** Starbucks, which grew from 100 employees to over 100,000 in just over a decade, provides structures to support improvisation. In a July 1998 Fast Company article on rapid growth, Starbucks chairman Howard Schultz said, "You can't grow if you're driven only by process, or only by the creative spirit. You've got to achieve a fragile balance between the two sides of the corporate brain."
2. **Learning organization.** Following a four-year study of the Toyota Production System, Steven J. Spear and H. Kent Bowen concluded in Harvard Business Review that the legendary flexibility of Toyota's operations is due to the way the scientific method is ingrained in its workers – not through formal training or manuals (the production system has never been written down) but through

unwritten principles that govern how workers work, interact, construct, and learn.

Idea generation. Texas Instruments credits its “Lunatic Fringe”—“an informal and amorphous group of TI engineers (and their peers and contacts outside the company),” according to Fortune Magazine—for its recent successes. “There’s this continuum between total chaos and total order,” Gene Frantz, the hub of this informal network, explained to Fortune. “About 95% of the people in TI are total order, and I thank God for them every day, because they create the products that allow me to spend money. I’m down here in total chaos, that total chaos of innovation. As a company we recognize the difference between those two and encourage both to occur.”

## Organizational structure

An **organizational structure** is a mainly hierarchical concept of subordination of entities that collaborate and contribute to serve one common aim.

Organizations are a variant of clustered entities. An organization can be structured in many different ways and styles, depending on their objectives and ambiance. The structure of an organization will determine the modes in which it operates and performs.

Organizational structure allows the expressed allocation of responsibilities for different functions and processes to different entities such as the branch, department, workgroup and individual. Individuals in an organizational structure are normally hired under time-limited work contracts or work orders, or under permanent employment contracts or program orders.

## Operational organizations and informal organizations

The set organizational structure may not coincide with facts, evolving in operational action. Such divergence decreases performance, when growing. E.g. a wrong organizational structure may hamper cooperation and thus hinder the completion of orders in due time and within limits of resources and budgets. Organizational structures shall be adaptive to process requirements, aiming to optimize the ratio of effort and input to output.

An effective organizational structure shall facilitate working relationships between various entities in the organization and may improve the working efficiency within the organizational units. Organization shall retain a set order and control to enable monitoring the processes. Organization shall support command for coping with a mix of orders and a change of conditions while performing work. Organization shall allow for application of individual skills to enable high flexibility and apply creativity. When a business expands, the chain of command will lengthen and the spans of control will widen. When an organization comes to age, the flexibility will decrease and the creativity will fatigue. Therefore organizational structures shall be altered

from time to time to enable recovery. If such alteration is prevented internally, the final escape is to turn down the organization to prepare for a re-launch in an entirely new set up.

## Success factors

Common success criteria for organizational structures are:

- Decentralized reporting
- Flat hierarchy
- High transient speed
- High transparency
- Low residual mass
- Permanent monitoring
- Rapid response
- Shared reliability
- Matrix hierarchy

Organizational structures developed from the ancient times of hunters and collectors in tribal organizations through highly royal and clerical power structures to industrial structures and today's post-industrial structures.

## Organizational structure types

### Pre-bureaucratic structures

Pre-bureaucratic (entrepreneurial) structures lack standardization of tasks. This structure is most common in smaller organizations and is best used to solve simple tasks. The structure is totally centralized. The strategic leader makes all key decisions and most communication is done by one on one conversations. It is particularly useful for new (entrepreneurial) business as it enables the founder to control growth and development.

They are usually based on traditional domination or charismatic domination in the sense of Max Weber's tripartite classification of authority.

### Bureaucratic structures

Bureaucratic structures have a certain degree of standardization. They are better suited for more complex or larger scale organizations. They usually adopt a tall structure. Then tension between bureaucratic structures and non-bureaucratic is echoed in Burns and Stalker distinction between mechanistic and organic structures.

### Functional structure

Employees within the functional divisions of an organization tend to perform a specialized set of tasks, for instance the engineering department would be staffed only with engineers. This leads to operational efficiencies within that group. However

it could also lead to a lack of communication between the functional groups within an organization, making the organization slow and inflexible.

As a whole, a functional organization is best suited as a producer of standardized goods and services at large volume and low cost. Coordination and specialization of tasks are centralized in a functional structure, which makes producing a limited amount of products or services efficient and predictable. Moreover, efficiencies can further be realized as functional organizations integrate their activities vertically so that products are sold and distributed quickly and at low cost. For instance, a small business could start making the components it requires for production of its products instead of procuring it from an external organization.

### Divisional structure

Also called a "product structure", the divisional structure groups each organizational function into a divisions. Each division within a divisional structure contains all the necessary resources and functions within it. Divisions can be categorized from different points of view. There can be made a distinction on geographical basis (an US division and an EU division) or on product/service basis (different products for different customers: households or companies). Another example, an automobile company with a divisional structure might have one division for SUVs, another division for subcompact cars, and another division for sedans. Each division would have its own sales, engineering and marketing departments.

### Matrix structure

The matrix structure groups employees by both function and product. This structure can combine the best of both separate structures. A matrix organization frequently uses teams of employees to accomplish work, in order to take advantage of the strengths, as well as make up for the weaknesses, of functional and decentralized forms. An example would be a company that produces two products, "product a" and "product b". Using the matrix structure, this company would organize functions within the company as follows: "product a" sales department, "product a" customer service department, "product a" accounting, "product b" sales department, "product b" customer service department, "product b" accounting department. Matrix structure is the most complex of the different organizational structures.

- **Weak/Functional Matrix:** A project manager with only limited authority is assigned to oversee the cross- functional aspects of the project. The functional managers maintain control over their resources and project areas.
- **Balanced/Functional Matrix:** A project manager is assigned to oversee the project. Power is shared equally between the project manager and the functional managers. It brings the best aspects of functional and projectized organizations. However, this is the most difficult system to maintain as the sharing power is delicate proposition.
- **Strong/Project Matrix:** A project manager is primarily responsible for the project. Functional managers provide technical expertise and assign resources as needed.

Among these matrixes, there is no best format; implementation success always depends on organization's purpose and function.

### Organizational circle: moving back to flat

The flat structure is common in enterpreneurial start-ups, university spin offs or small companies in general. As the company grows, however, it becomes more complex and hierarchical, which leads to an expanded structure, with more levels and departments.

Often, it would result in bureaucracy, the most prevalent structure in the past. It is still, however, relevant in former Soviet Republics and China, as well as in most governmental organizations all over the world. Shell Group used to represent the typical bureaucracy: top-heavy and hierarchical. It featured multiple levels of command and duplicate service companies existing in different regions. All this made Shell apprehensive to market changes , leading to its incapacity to grow and develop further. The failure of this structure became the main reason for the company restructuring into a matrix.

Starbucks is one of the numerous large organizations that successfully developed the matrix structure supporting their focused strategy. Its design combines functional and product based divisions, with employees reporting to two heads. Creating a team spirit, the company empowers employees to make their own decisions and train them to develop both hard and soft skills. That makes Starbucks one of the best at customer service.

Some experts also mention the multinational design , common in global companies, such as Procter & Gamble, Toyota and Unilever. This structure can be seen as a complex form of the matrix, as it maintains coordination among products, functions and geographic areas.

In general, over the last decade, it has become increasingly clear that through the forces of globalization, competition and more demanding customers, the structure of many companies has become flatter, less hierarchical, more fluid and even virtual.

### Team

One of the newest organizational structures developed in the 20th century is team. In small businesses, the team structure can define the entire organization . Teams can be both horizontal and vertical. While an organization is constituted as a set of people who synergize individual competencies to achieve newer dimensions, the quality of organizational structure revolves around the competencies of teams in totality. For example, every one of the Whole Foods Market stores, the largest natural-foods grocer in the US developing a focused strategy, is an autonomous profit centre composed of an average of 10 self-managed teams, while team leaders in each store and each region are also a team. Larger bureaucratic organizations can benefit from the flexibility of teams as well. Xerox, Motorola, and DaimlerChrysler are all among the companies that actively use teams to perform tasks.

## Network

Another modern structure is network. While business giants risk becoming *too clumsy to proact, act and react efficiently* <sup>[13]</sup>, the new network organizations contract out any business function, that can be done better or more cheaply. In essence, managers in network structures spend most of their time coordinating and controlling external relations, usually by electronic means. H&M is outsourcing its clothing to a network of 700 suppliers, more than two-thirds of which are based in low-cost Asian countries. Not owning any factories, H&M can be more flexible than many other retailers in lowering its costs, which aligns with its low-cost strategy<sup>[14]</sup>. The potential management opportunities offered by recent advances in complex networks theory have been demonstrated <sup>[15]</sup> including applications to product design and development <sup>[16]</sup>, and innovation problem in markets and industries <sup>[17]</sup>

## Organization development

**Organization development** (OD) is often defined as a planned, top-down, organization-wide effort to increase the organization's effectiveness and health. According to Warren Bennis, OD is a complex strategy intended to change the beliefs, attitudes, values, and structure of organizations so that they can better adapt to new technologies, markets, and challenges. OD is neither "anything done to better an organization" nor is it "the training function of the organization"; it is a particular kind of change process designed to bring about a particular kind of end result. OD can involve interventions in the organization's "processes," using behavioural science knowledge<sup>[1]</sup> as well as organizational reflection, system improvement, planning, and self-analysis<sup>1</sup>.

Kurt Lewin (1898 - 1947) is widely recognized as the founding father of OD, although he died before the concept became current in the mid-1950s. From Lewin came the ideas of group dynamics, and action research which underpin the basic OD process as well as providing its collaborative consultant/client ethos. Institutionally, Lewin founded the "Research Center for Group Dynamics" at MIT, which moved to Michigan after his death. RCGD colleagues were among those who founded the National Training Laboratories (NTL), from which the T-group and group-based OD emerged. In the UK, working as close as was possible with Lewin and his colleagues, the Tavistock Institute of Human Relations was important in developing systems theories. Important too was the joint TIHR journal Human Relations, although nowadays the Journal of Applied Behavioral Sciences is seen as the leading OD journal.

The term "Organization Development" is often used interchangeably with Organizational effectiveness, especially when used as the name of a department within an organization. Organization Development is a growing field that is responsive to many new approaches including Positive Adult Development.

## Overview

At the core of OD is the concept of organization, defined as two or more people working together toward one or more shared goal(s). Development in this context is the notion that an organization may become more effective over time at achieving its goals.

OD is a long range effort to improve organization's problem solving and renewal processes, particularly through more effective and collaborative management of organizational culture, often with the assistance of a change agent or catalyst and the use of the theory and technology of applied behavioral science.

Organization development is a "*contractual relationship between a change agent and a sponsoring organization entered into for the purpose of using applied behavioral science in a systems context to improve organizational performance and the capacity of the organization to improve itself*"

Organization development is an ongoing, systematic process to implement effective change in an organization. Organization development is known as both a field of applied behavioral science focused on understanding and managing organizational change and as a field of scientific study and inquiry. It is interdisciplinary in nature and draws on sociology, psychology, and theories of motivation, learning, and personality.

## Contractual Relationship

Although neither the sponsoring organization nor the change agent can be sure at the outset of the exact nature of the problem or problems to be dealt with or how long the change agents' help will be needed, it is essential that some tentative agreement on these matters be reached. The sponsoring organization needs to know generally what the change agent's preliminary plan is, what its own commitments are in relation to personal commitments and responsibility for the program, and what the change agent's fee will be. The change agent must assure himself that the organization's, and particularly the top executives', commitment to change is strong enough to support the kind of self-analysis and personal involvement requisite to success of the program. Recognizing the uncertainties lying ahead on both sides, a termination agreement permitting either side to withdraw at any time is usually included.

## Change Agent

A change agent in the sense used here is not a technical expert skilled in such functional areas as accounting, production, or finance. He is a behavioral scientist who knows how to get people in an organization involved in solving their own problems. His main strength is a comprehensive knowledge of human behavior, supported by a number of intervention techniques (to be discussed later). The change agent can be either external or internal to the organization. An internal change agent is usually a staff person who has expertise in the behavioral sciences and in the intervention technology of OD. Beckhard reports several cases in which

line people have been trained in OD and have returned to their organizations to engage in successful change assignments. The change agent may be a staff or line member of the organization who is schooled in OD theory and technique. In such a case, the "contractual relationship" is an in-house agreement that should probably be explicit with respect to all of the conditions involved except the fee.

## Sponsoring Organization

The initiative for OD programs comes from an organization that has a problem. This means that top management or someone authorized by top management is aware that a problem exists and has decided to seek help in solving it. There is a direct analogy here to the practice of psychotherapy: The client or patient must actively seek help in finding a solution to his problems. This indicates a willingness on the part of the client organization to accept help and assures the organization that management is actively concerned.

## Applied Behavioral Science

One of the outstanding characteristics of OD that distinguishes it from most other improvement programs is that it is based on a "helping relationship." Some believe that the change agent is not a physician to the organization's ills; that s/he does not examine the "patient," make a diagnosis, and write a prescription. Nor does s/he try to teach organizational members a new inventory of knowledge which they then transfer to the job situation. Using theory and methods drawn from such behavioral sciences as (industrial/organisational psychology, industrial sociology, communication, cultural anthropology, administrative theory, organizational behavior, economics, and political science, the change agent's main function is to help the organization define and solve its own problems. The basic method used is known as action research. This approach, which is described in detail later, consists of a preliminary diagnosis, collecting data, feedback of the data to the client, data exploration by the client group, action planning based on the data, and taking action.

## Systems Context

OD deals with a total system — the organization as a whole, including its relevant environment — or with a subsystem or systems — departments or work groups — in the context of the total system. Parts of systems, for example, individuals, cliques, structures, norms, values, and products are not considered in isolation; the principle of interdependency, that is, that change in one part of a system affects the other parts, is fully recognized. Thus, OD interventions focus on the total culture and cultural processes of organizations. The focus is also on groups, since the relevant behavior of individuals in organizations and groups is generally a product of group influences rather than personality.

## Improved Organizational Performance

The objective of OD is to improve the organization's capacity to handle its internal and external functioning and relationships. This would include such things as



improved interpersonal and group processes, more effective communication, enhanced ability to cope with organizational problems of all kinds, more effective decision processes, more appropriate leadership style, improved skill in dealing with destructive conflict, and higher levels of trust and cooperation among organizational members. These objectives stem from a value system based on an optimistic view of the nature of man — that man in a supportive environment is capable of achieving higher levels of development and accomplishment. Essential to organization development and effectiveness is the scientific method — inquiry, a rigorous search for causes, experimental testing of hypotheses, and review of results.

## Organizational Self-Renewal

The ultimate aim of OD practitioners is to "work themselves out of a job" by leaving the client organization with a set of tools, behaviors, attitudes, and an action plan with which to monitor its own state of health and to take corrective steps toward its own renewal and development. This is consistent with the systems concept of feedback as a regulatory and corrective mechanism.

## Early development

Kurt Lewin played a key role in the evolution of organization development as it is known today. As early as World War II, Lewin experimented with a collaborative change process (involving himself as consultant and a client group) based on a three-step process of planning, taking action, and measuring results. This was the forerunner of action research, an important element of OD, which will be discussed later. Lewin then participated in the beginnings of laboratory training, or T-groups, and, after his death in 1947, his close associates helped to develop survey-research methods at the University of Michigan. These procedures became important parts of OD as developments in this field continued at the National Training Laboratories and in growing numbers of universities and private consulting firms across the country.

The failure of off-site laboratory training to live up to its early promise was one of the important forces stimulating the development of OD. Laboratory training is learning from a person's "here and now" experience as a member of an ongoing training group. Such groups usually meet without a specific agenda. Their purpose is for the members to learn about themselves from their spontaneous "here and now" responses to an ambiguous hypothetical situation. Problems of leadership, structure, status, communication, and self-serving behavior typically arise in such a group. The members have an opportunity to learn something about themselves and to practice such skills as listening, observing others, and functioning as effective group members.

## Modern development

In recent years, serious questioning has emerged about the relevance of OD to managing change in modern organizations. The need for "reinventing" the field has become a topic that even some of its "founding fathers" are discussing critically.

With this call for reinvention and change, scholars have begun to examine organizational development from an emotion-based standpoint. For example, deKlerk (2007) writes about how emotional trauma can negatively affect performance. Due to downsizing, outsourcing, mergers, restructuring, continual changes, invasions of privacy, harassment, and abuses of power, many employees experience the emotions of aggression, anxiety, apprehension, cynicism, and fear, which can lead to performance decreases. deKlerk (2007) suggests that in order to heal the trauma and increase performance, O.D. practitioners must acknowledge the existence of the trauma, provide a safe place for employees to discuss their feelings, symbolize the trauma and put it into perspective, and then allow for and deal with the emotional responses. One method of achieving this is by having employees draw pictures of what they feel about the situation, and then having them explain their drawings with each other. Drawing pictures is beneficial because it allows employees to express emotions they normally would not be able to put into words. Also, drawings often prompt active participation in the activity, as everyone is required to draw a picture and then discuss its meaning.

## OD interventions

"Interventions" are principal learning processes in the "action" stage (see *Figure 1*) of organization development. Interventions are structured activities used individually or in combination by the members of a client system to improve their social or task performance. They may be introduced by a change agent as part of an improvement program, or they may be used by the client following a program to check on the state of the organization's health, or to effect necessary changes in its own behavior. "Structured activities" mean such diverse procedures as experiential exercises, questionnaires, attitude surveys, interviews, relevant group discussions, and even lunchtime meetings between the change agent and a member of the client organization. Every action that influences an organization's improvement program in a change agent-client system relationship can be said to be an intervention.

There are many possible intervention strategies from which to choose. Several assumptions about the nature and functioning of organizations are made in the choice of a particular strategy. Beckhard lists six such assumptions:

1. The basic building blocks of an organization are groups (teams). Therefore, the basic units of change are groups, not individuals.
2. An always relevant change goal is the reduction of inappropriate competition between parts of the organization and the development of a more collaborative condition.
3. Decision making in a healthy organization is located where the information sources are, rather than in a particular role or level of hierarchy.
4. Organizations, subunits of organizations, and individuals continuously manage their affairs against goals. Controls are interim measurements, not the basis of managerial strategy.
5. One goal of a healthy organization is to develop generally open communication, mutual trust, and confidence between and across levels.

6. People support what they help create. People affected by a change must be allowed active participation and a sense of ownership in the planning and conduct of the change.

Interventions range from those designed to improve the effectiveness of individuals through those designed to deal with teams and groups, intergroup relations, and the total organization. There are interventions that focus on task issues (what people do), and those that focus on process issues (how people go about doing it). Finally, interventions may be roughly classified according to which change mechanism they tend to emphasize: for example, feedback, awareness of changing cultural norms, interaction and communication, conflict, and education through either new knowledge or skill practice.

One of the most difficult tasks confronting the change agent is to help create in the client system a safe climate for learning and change. In a favorable climate, human learning builds on itself and continues indefinitely during man's lifetime. Out of new behavior, new dilemmas and problems emerge as the spiral continues upward to new levels. In an unfavorable climate, in contrast, learning is far less certain, and in an atmosphere of psychological threat, it often stops altogether. Unfreezing old ways can be inhibited in organizations because the climate makes employees feel that it is inappropriate to reveal true feelings, even though such revelations could be constructive. In an inhibited atmosphere, therefore, necessary feedback is not available. Also, trying out new ways may be viewed as risky because it violates established norms. Such an organization may also be constrained because of the law of systems: If one part changes, other parts will become involved. Hence, it is easier to maintain the status quo. Hierarchical authority, specialization, span of control, and other characteristics of formal systems also discourage experimentation.

The change agent must address himself to all of these hazards and obstacles. Some of the things which will help him are:

1. A real need in the client system to change
2. Genuine support from management
3. Setting a personal example: listening, supporting behavior
4. A sound background in the behavioral sciences
5. A working knowledge of systems theory
6. A belief in man as a rational, self-educating being fully capable of learning better ways to do things.

A few examples of interventions include team building, coaching, Large Group Interventions, mentoring, performance appraisal, downsizing, TQM, and leadership development.

## **Organizational culture**

**Organizational culture** is an idea in the field of Organizational studies and management which describes the psychology, attitudes, experiences, beliefs and values (personal and cultural values) of an organization. It has been defined as "the specific collection of values and norms that are shared by people and groups in an

organization and that control the way they interact with each other and with stakeholders outside the organization."

This definition continues to explain **organizational values** also known as "beliefs and ideas about what kinds of goals members of an organization should pursue and ideas about the appropriate kinds or standards of behavior organizational members should use to achieve these goals. From organizational values develop organizational norms, guidelines or expectations that prescribe appropriate kinds of behavior by employees in particular situations and control the behavior of organizational members towards one another."

Organizational culture is not the same as **corporate culture**. It is wider and deeper concepts, something that an organization 'is' rather than what it 'has'

**Corporate culture** is the total sum of the values, customs, traditions and meanings that make a company unique. Corporate culture is often called "the character of an organization" since it embodies the vision of the company's founders. The values of a corporate culture influence the ethical standards within a corporation, as well as managerial behavior.

Senior management may try to determine a *corporate culture*. They may wish to impose corporate values and standards of behavior that specifically reflect the objectives of the organization. In addition, there will also be an extant internal culture within the workforce. Work-groups within the organization have their own behavioral quirks and interactions which, to an extent, affect the whole system. Roger Harrison's four-culture typology, and adapted by Charles Handy, suggests that unlike organizational culture, corporate culture can be 'imported'. For example, computer technicians will have expertise, language and behaviors gained independently of the organization, but their presence can influence the culture of the organization as a whole.

### **Strong/weak cultures**

**Strong culture** is said to exist where staff respond to stimulus because of their alignment to organizational values. In such environments, strong cultures help firms operate like well-oiled machines, cruising along with outstanding execution and perhaps minor tweaking of existing procedures here and there.

Conversely, there is **weak culture** where there is little alignment with organizational values and control must be exercised through extensive procedures and bureaucracy.

Where culture is strong—people do things because they believe it is the right thing to do—there is a risk of another phenomenon, Groupthink. "Groupthink" was described by Irving L. Janis. He defined it as "...a quick and easy way to refer to a mode of thinking that people engage when they are deeply involved in a cohesive ingroup, when members' strivings for unanimity override their motivation to realistically appraise alternatives of action." This is a state where people, even if they have different ideas, do not challenge organizational thinking, and therefore there is a

reduced capacity for innovative thoughts. This could occur, for example, where there is heavy reliance on a central charismatic figure in the organization, or where there is an evangelical belief in the organization's values, or also in groups where a friendly climate is at the base of their identity (avoidance of conflict). In fact group think is very common, it happens all the time, in almost every group. Members that are defiant are often turned down or seen as a negative influence by the rest of the group, because they bring conflict.

Innovative organizations need individuals who are prepared to challenge the status quo—be it groupthink or bureaucracy, and also need procedures to implement new ideas effectively.

### Types of organizational cultures

- **The Tough-Guy Macho Culture.** Feedback is quick and the rewards are high. This often applies to fast moving financial activities such as brokerage, but could also apply to a police force, or athletes competing in team sports. This can be a very stressful culture in which to operate.
- **The Work Hard/Play Hard Culture** is characterized by few risks being taken, all with rapid feedback. This is typical in large organizations, which strive for high quality customer service. It is often characterized by team meetings, jargon and buzzwords.
- **The Bet your Company Culture**, where big stakes decisions are taken, but it may be years before the results are known. Typically, these might involve development or exploration projects, which take years to come to fruition, such as oil prospecting or military aviation.
- **The Process Culture** occurs in organizations where there is little or no feedback. People become bogged down with how things are done not with what is to be achieved. This is often associated with bureaucracies. While it is easy to criticize these cultures for being overly cautious or bogged down in red tape, they do produce consistent results, which is ideal in, for example, public services.
- A **Power Culture** which concentrates power among a few. Control radiates from the center like a web. Power Cultures have few rules and little bureaucracy; swift decisions can ensue.
- In a **Role Culture**, people have clearly delegated authorities within a highly defined structure. Typically, these organizations form hierarchical bureaucracies. Power derives from a person's position and little scope exists for expert power.
- By contrast, in a **Task Culture**, teams are formed to solve particular problems. Power derives from expertise as long as a team requires expertise. These cultures often feature the multiple reporting lines of a matrix structure.
- A **Person Culture** exists where all individuals believe themselves superior to the organization. Survival can become difficult for such organizations, since the concept of an organization suggests that a group of like-minded individuals pursue the organizational goals. Some professional partnerships can operate as person cultures, because each partner brings a particular expertise and clientele to the firm.

**The Blame culture** This culture cultivates distrust and fear, people blame each other to avoid being reprimanded or put down, this results in no new ideas or personal initiative because people don't want to risk being wrong.

**Multi-directional culture** This culture cultivates minimized cross-department communication and cooperation. Loyalty is only to specific groups (departments). Each department becomes a clique and is often critical of other departments which in turn creates lots of gossip. The lack of cooperation and Multi-Direction is manifested in the organization's inefficiency.

**Live and let live culture** This culture is Complacency, it manifests Mental Stagnation and Low Creativity. People here have little future vision and have given up their passion. There is average cooperation and communication, and things do work, but they do not grow. People have developed their personal relationships and decided who to stay away from, there is not much left to learn.

**Brand congruent culture** People in this culture believe in the product or service of the organization, they feel good about what their company is trying to achieve and cooperate to achieve it. People here are passionate and seem to have similar goals in the organisation. They use personal resources to actively solve problems and while they don't always accept the actions of management or others around them, they see their job as important. Most everyone in this culture is operating at the level of Group.

**Leadership enriched culture** People view the organization as an extension of themselves, they feel good about what they personally achieve through the organization and have exceptional Cooperation. Individual goals are aligned with the goals of the organization and people will do what it takes to make things happen. As a group, the organization is more like family providing personal fulfillment which often transcends ego so people are consistently bringing out the best in each other. In this culture, Leaders do not develop followers, but develop other leaders. Most everyone in this culture is operating at the level of Organization.

- Constructive Cultures, in which members are encouraged to interact with people and approach tasks in ways that help them meet their higher-order satisfaction needs.
- Passive/Defensive Cultures, in which members believe they must interact with people in ways that will not threaten their own security.
- Aggressive/Defensive Cultures, in which members are expected to approach tasks in forceful ways to protect their status and security.

The Constructive Cluster, this includes cultural norms that reflect expectations for members to interact with others and approach tasks in ways that will help them meet their higher order satisfaction needs for affiliation, esteem, and self-actualization.

The four cultural norms in this cluster are:

- Achievement
- Self-Actualizing
- Humanistic-Encouraging
- Affiliative

Organizations with Constructive cultures encourage members to work to their full potential, resulting in high levels of motivation, satisfaction, teamwork, service quality, and sales growth. Constructive norms are evident in environments where quality is valued over quantity, creativity is valued over conformity, cooperation is believed to lead to better results than competition, and effectiveness is judged at the system level rather than the component level. These types of cultural norms are consistent with (and supportive of) the objectives behind empowerment, total quality management, transformational leadership, continuous improvement, reengineering, and learning organizations.

The Passive/Defensive Cluster Norms that reflect expectations for members to interact with people in ways that will not threaten their own security are in the Passive/Defensive Cluster.

The four Passive/Defensive cultural norms are:

- Approval • Conventional • Dependent • Avoidance

In organizations with Passive/Defensive cultures, members feel pressured to think and behave in ways that are inconsistent with the way they believe they should in order to be effective. People are expected to please others (particularly superiors) and avoid interpersonal conflict. Rules, procedures, and orders are more important than personal beliefs, ideas, and judgment. Passive/Defensive cultures experience a lot of unresolved conflict and turnover, and organizational members report lower levels of motivation and satisfaction.

The Aggressive/Defensive Cluster The Aggressive/Defensive Cluster includes cultural norms that reflect expectations for members to approach tasks in ways that protect their status and security.

The Aggressive/Defensive cultural norms are:

- Oppositional • Power • Competitive • Perfectionistic

Organizations with Aggressive/Defensive cultures encourage or require members to appear competent, controlled, and superior. Members who seek assistance, admit shortcomings, or concede their position are viewed as incompetent or weak. These organizations emphasize finding errors, weeding out "mistakes," and encouraging members to compete against each other rather than competitors. The short-term gains associated with these strategies are often at the expense of long-term growth.

### **Elements used to describe organizational culture**

- **The Paradigm:** What the organization is about; what it does; its mission; its values.
- **Control Systems:** The processes in place to monitor what is going on. Role cultures would have vast rulebooks. There would be more reliance on individualism in a power culture.

- **Organizational Structures:** Reporting lines, hierarchies, and the way that work flows through the business.
- **Power Structures:** Who makes the decisions, how widely spread is power, and on what is power based?
- **Symbols:** These include organizational logos and designs, but also extend to symbols of power such as parking spaces and executive washrooms.
- **Rituals and Routines:** Management meetings, board reports and so on may become more habitual than necessary.
- **Stories and Myths:** build up about people and events, and convey a message about what is valued within the organization.

These elements may overlap. Power structures may depend on control systems, which may exploit the very rituals that generate stories which may not be true.

## Entrepreneurial culture

Stephen McGuire defined and validated a model of organizational culture that predicts revenue from new sources. An Entrepreneurial Organizational Culture (EOC) is a system of shared values, beliefs and norms of members of an organization, including valuing creativity and tolerance of creative people, believing that innovating and seizing market opportunities are appropriate behaviors to deal with problems of survival and prosperity, environmental uncertainty, and competitors' threats, and expecting organizational members to behave accordingly.

## Elements of Entrepreneurial Culture

- People and empowerment focused
- Value creation through innovation and change
- Attention to the basics
- Hands-on management
- Doing the right thing
- Freedom to grow and to fail
- Commitment and personal responsibility
- Emphasis on the future

## Organizational communication perspective on culture

The organizational communication perspective on culture is divided into three areas:

- **Traditionalism:** Views culture through objective things such as stories, rituals, and symbols
- **Interpretivism:** Views culture through a network of shared meanings (organization members sharing subjective meanings)
- **Critical-Interpretivism:** Views culture through a network of shared meanings as well as the power struggles created by a similar network of competing meanings

There are many different types of communication that contribute in creating an organizational culture:



- **Metaphors** such as comparing an organization to a machine or a family reveal employees' shared meanings of experiences at the organization.
- **Stories** can provide examples for employees of how to or not to act in certain situations.
- **Rites and ceremonies** combine stories, metaphors, and symbols into one. Several different kinds of rites that affect organizational culture:
  - **Rites of passage:** employees move into new roles
  - **Rites of degradation:** employees have power taken away from them
  - **Rites of enhancement:** public recognition for an employee's accomplishments
  - **Rites of renewal:** improve existing social structures
  - **Rites of conflict reduction:** resolve arguments between certain members or groups
  - **Rites of integration:** reawaken feelings of membership in the organization
- **Reflexive comments** are explanations, justifications, and criticisms of our own actions. This includes:
  - **Plans:** comments about anticipated actions
  - **Commentaries:** comments about action in the present
  - **Accounts:** comments about an action or even that has already occurred

Such comments reveal interpretive meanings held by the speaker as well as the social rules they follow.

- **Fantasy Themes** are common creative interpretations of events that reflect beliefs, values, and goals of the organization. They lead to rhetorical visions, or views of the organization and its environment held by organization members.

## Schema

**Schemata** (plural of schema) are knowledge structures a person forms from past experiences allowing them to respond to similar events more efficiently in the future by guiding the processing of information. Schemata are created through interaction with others and thus inherently involve communication.

Stanley G. Harris argues that five categories of in-organization schemata are necessary for organizational culture:

- **Self-in-organization schemata:** a person's concept of themselves within the context of the organization, including their personality, roles, and behavior
- **Person-in-organization schemata:** a person's memories, impressions and expectations of other individuals within the organization
- **Organization schemata:** subset of person schemata, a person's generalized perspective on others as a whole in the organization
- **Object/concept-in-organization schemata:** knowledge an individual has of organization aspects other than other people
- **Event-in-organization schemata:** a person's knowledge of social events within an organization

All of these categories together represent a person's knowledge of an organization. Organizational culture is created when the schemata's of individuals within an organization come to resemble each other. This is primarily done through organizational communication as individuals directly or indirectly share knowledge and meanings.

## **Mergers, organizational culture, and cultural leadership**

One of the biggest obstacles in the way of the merging of two organizations is organizational culture. Each organization has its own unique culture and most often, when brought together, these cultures clash. When mergers fail employees point to issues such as identity, communication problems, human resources problems, ego clashes, and inter-group conflicts, which all fall under the category of "cultural differences". One way to combat such difficulties is through cultural leadership. Organizational leaders must also be cultural leaders and help facilitate the change from the two old cultures into the one new culture. This is done through cultural innovation followed by cultural maintenance.

- **Cultural innovation** includes:
  - **Creating** a new culture: recognizing past cultural differences and setting realistic expectations for change
  - **Changing** the culture: weakening and replacing the old cultures
- **Cultural maintenance** includes:
  - **Integrating** the new culture: reconciling the differences between the old cultures and the new one
  - **Embodying** the new culture: Establishing, affirming, and keeping the new culture

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**AFRICA POPULATION INSTITUTE COURSE WORKS**  
**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

**HUMAN RESOURCE MANAGEMENT**

**PAPER CODES: APDLPS 205**

1. Human resource management is the function within an organization that focuses on recruitment and providing direction for the people who work within the organization.
  - a) Examine the features of the Human resources
  - b) Discuss the roles of human resource management
2. a) Elaborate the aims of performance appraisal  
b) What are popular methods used in performance appraisal
3. a) What are the advantages and disadvantages of job rotation in the organisation?  
b) What are some of the factors that determine wage rate of a country?

**COMMUNICATION SKILLS**

**PAPER CODES: APD(PM 203, BA 203, LPS 204, PA 203, HR 204, FA 203)**

1. a) How can communication be effective?  
b) Mention and discuss the different type of communication you know?
2. a) Explain the different skills that used in communication process  
b) Discuss the advantages and disadvantages of advertising?
3. a) With examples explain what is meant by the communication design  
b) Show the ways of responding to angry customers.

**DEVELOPMENT ECONOMICS**  
**PAPER CODES: APDPA 204, APDPM 205**

1. a) Discuss the factors that may lead to high capital in the economy.  
b) What are the indicators of economic growth and development in your country?  
c) What is the difference between economic growth and economic development?
2. a) What do you understand by the term theory of determinism?  
b) Name and discuss the different theories which should be applied when determining economic growth of the economy.  
c) What are major causes of capital depreciation?
3. a) Give and discuss some factor which may lead to economic growth of the country.  
b) What are the effects of the growth?  
c. What are the major causes of income inequality especially in the developing countries?  
c) What should be done to reduce income inequality?

**ORGANISATIONAL MANAGEMENT**

**PAPER CODES: APD(PM 204, BA 204, SW 204, LPS 203, PA 205, HR 205)**

1. a) What are some of the factors that affect organisational management?  
b) Name and discuss different types of organisational behaviour
2. a) With a well labelled diagram describe and illustrate maslow's theory of hierarchy of needs.  
b) Why was this theory later criticised?
3. a) What are informal organisation?  
b) Outline the characteristics of this organisational structure  
c) Discuss the functions of informal organisation.