

- By the end of medieval period, the inception of "trading class" occurred.

(2)

- Steam engine was one of the driving forces in this period.
- Invention of lathe machine / mother machine occurred.
- Slowly, specialists of steam engine, other machines came into existence.
- This period was marked "a cult of individualisation" i.e. a period of individuals.
- Individualism was based on 3 sides
- → Adam Smith — father of economics, was born in this period (18th century)
- → He preached that "individuals' selfishness ultimately make the society wealthy" and "selfishness is the driving force of the economy."

→ Laissez Faire — lead alone { he is known by this name }

→ "An ideal govt is the one which doesn't interfere in business of businessmen." — A.S.M.

25/7/13

→ How to get rich?

— Jared Diamond

→ Per capita income of US, India, Norway

→ Who is Whitney? How is he related to invention his other contributions

- In pure communism, there is no private property, hence communism failed e.g. Communist Russia.

Communism — facts & historical development

- Adam Smith encouraged people to exploit their selfish interests and help in betterment of the society.
- His statements were substantiated by Charles Darwin — Father of Evolution. He preached "Every living creature will try to maximise his gain even if it needs to kill the weakest survival of the fittest".
- Darwin got the "inspiration" after he visited islands near Ecuador → Galapagos Islands (1835)
- In 1770, England enacted a "patent and copyright act". It simply recognised (i) the talents of individuals. It brings transparency in invention &

separation

PPP of India indicates inherent strength of Rupee
PPP also depends upon price of commodities e.g.
Nescafe costs here 5/- compared to \$1 in US

But real per capita income (1489\$) shows status
of rupee compared to dollar i.e. real
strength and also it shows quantum of
exports from India

(iii) Interchangeability :

- Eli Whitney discovered Cotton Gin (patented)
- Cotton gin increased the productivity of cotton industry.
- In 1798, US floated a tender of long guns (its armies needed guns). So, Eli used his interchangeability for producing guns.
- He planned the standardisation of gun parts i.e. he created a machine to produce only barrels, another to produce triggers.
- But, he couldn't assemble the parts due to a small variation in dismantled parts

- He solved the problem within 10 yrs and understood the concept of clearance and delivered 10K guns in 1808 (instead of 180)
- He made special numbers for standard sizes & introduced mass production
- ✓ More production, less price, more affordable for customers and portability of power.
- To do all this, money was required and to solve capital problem, floating / advent of shares came into existence.
- Concept of share came to increase flow of capital & productivity.
- In 1862, British Parliament enacted 'Industrial Act' which declared industry as an individual.
- Buying shares of a company → meant lending money to an individual i.e. money the company loses is not paid by the shareholder (owner) but he may lose the money he invested. The concept is called "limited liability of the shareholders".
- ↓
One advantage of this concept is that it can

easily liquidate (sell) in shares.

Fredrick Winslow Taylor :

- He was a mechanical engineer.
- He invented HSS (high speed steel) tool in 1841.
- He was the Father of Scientific Management.
- Scientific management - it actually talks about measurement and to measure to manage. The phenomenon of measurement is core of scientific management.
- Lord Kelvin - If u describe the phenomenon in terms of quantitative no., then we know what we are talking about.
- (FWT)
• He was the first person to measure the average day work of a person.

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Taylor's Methodology of Measuring Work:

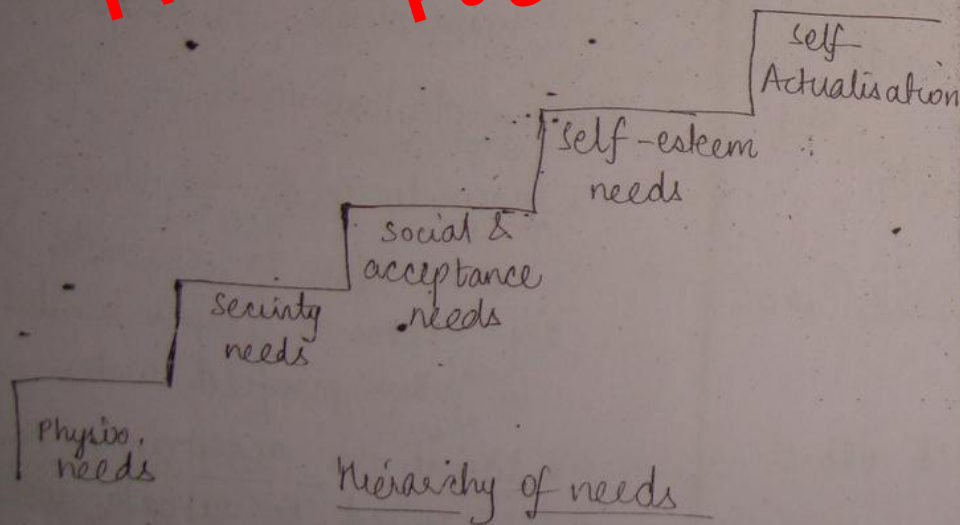
- He simply divided large tasks into smaller appropriate units. i.e. division of labour.
- His ^{central} philosophy is "For every job/process, there is one best method. Try to find out that method using experiments".
- Also, standardise the method and cause least harassment to the worker and pay the workers according to the benchmark.
→ also here was no systematic method of work.
- Soldiering : It was a strategy used by the workers to defend their domain and to defend themselves against more work; workers bringing in their own tools.
- He got the idea of analysing work.
- His method:
 - Taylor undertook the management task and calculated the optimum weight a worker can lift throughout the day without fatigue.
 - He manufactured different tools for lifting up different materials.
e.g., a small shovel for pig iron (higher density), a large shovel for wheat husk.

* Self-esteem needs →

If somebody is satisfied with acceptance needs, offer him self-esteem needs. It urges people for authority and power, urge of making some difference.

* Self-Actualisation →

Highest form of human motivation i.e. after reaching other positions, a person works for his passion.



i.e. He is no more guided by fears of his boss or any other desire. He does that simply because he loves it. It empowers the employees of an organisation. It speaks out about lot of autonomy.

Baba Amte — a successful criminal lawyer
The Idea Factory — Bell Labs (about self-actualisation)
Q. Who invented C++? Why he invented C++?

Jack Diamond — How to get rich:

- (1) Core idea was "isolation" leads to degradation of society.
- (2) He went to a place called Tasmania (Aus.) where people had forgotten their skills due to isolation.

Limitation of Maslow's theory:

- (1) Man needn't follow this hierarchy as he can jump-start from anywhere.
- (2) To implement self-actualisation in an organisation is quite difficult.

Shourup

I. Spuristan — (i) worked in Bell Labs

- ↓
- invented C, C++, Unix (O.S)

(ii) Bell Labs succeeded because they work on self-actualisation theory. They give lot of freedom to the researchers.

(iii) He came out with OOP (Object-Oriented)

Programming) and thought existing languages weren't too suitable for human needs.

Note: Recently, inventor of STM (Scanned Tunneling Microscope) died. He was father of Nanotechnology (HEINRICH ROHRER).

3rd model — Herzberg Two factor theory:

(1) He says that there are 2 kinds of needs. These 2 needs drive the people's motive.

(2) There are certain needs which drive the ppl. while certain needs provide only satisfaction.

(3) He categorised Maslow's needs into 2 parts.

(4) Hygiene factors —

They simply satisfy the employees e.g. increments, food needs; They never motivate.

(5) Motivational factors —

They motivate the people e.g. if u work well, you will be promoted to General Manager; these are motivators.

Self-actualisⁿ — it gives autonomy about the position.

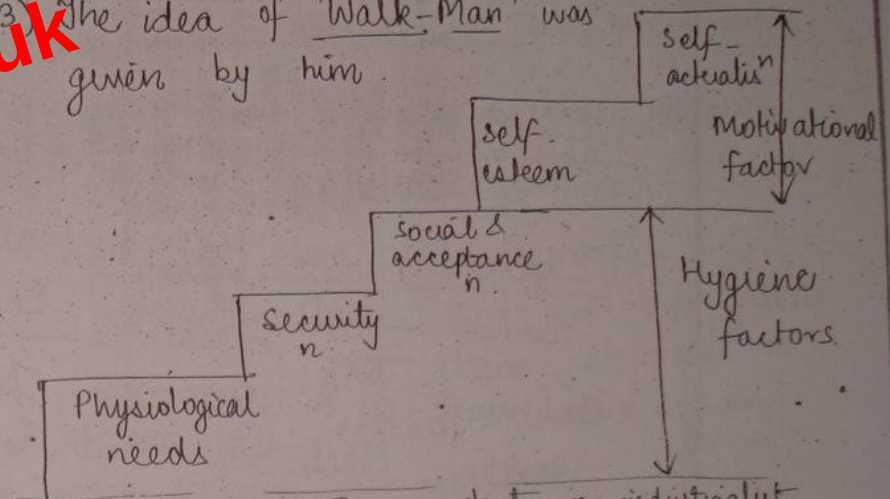
(6) His model is valid for middle to top level executives (not for workers).

Akio Morita:

(1) Founder of Sony Corporation.

(2) His book is "Made in Japan".

(3) The idea of "Walk-Man" was given by him.



→ Japanese electronics industrialist

(4) He had Ibuka as his R & D incharge to create walkman.

(5) Ibuka took the task assigned to him as a challenge and invented it.

(6) Ibuka didn't do it out of any greed, but out of self-actualisation.

* James Gordon — Invented of MASER (Microwave Amplificⁿ by Stimulated Emissⁿ of Radiatⁿ)

He did his PHD under a prof. who invented LASER.

- (7) The higher level executives take hygiene factor for granted but for a worker, 80% of his salary is used to satiate his needs (hygiene factor)

Leadership :

- (1) Part of Directing Function of Managers
(2) Experiment on How a leader will Enforce — Hawthorne Experiment :

- Hawthorne is a place near Chicago and Western Electrical Plant is located there. production → has 20,000 workers.
- It is a division of AT & T (American Telephone & Telegraph)
- It's founder was none other than Alexander Graham Bell.
- The R & D part of AT & T — Bell Labs
Product " " — W. Electrical Plant
- These experiments started in 1923 & ended in 1927.

- The motivation for his exp. was that workers were not giving out their best
- Even this company (plant) had chalked out a Wage Incentive Scheme. But, scenario changed when not a single worker earned bonus and they became lethargic.

Taylor's philosophy — Pay more to those who do overtime & vice-versa according to an optimum wage defined for a worker & underpay those who are lethargic

Elton Mayo & R-J. Roethlisberger

- These 2 ^{professors} were brought from Harvard to investigate about the half hearted approach of the workers.
- They found out that may be the physical environment e.g. work schedule is (are) hindering the workers to perform well. 1923-27
- They performed "Lighting Experiment"

overnight, rather he strictly adheres to the norms of the group; addresses ~~the~~ ~~his~~ his subordinates with their first names.

Role of Managers
The primary groups influence the working of the organisation and cause the format of "informal organisational structure".

• If the organisⁿ is working well, then the norms of primary groups is in line with organisational norms — better than formal organisⁿ structure.

• Any manager has to influence the primary groups or identify a group and influence its leader.

• Formal organisⁿ structure is highly bureaucratic (red tape).

• Managers always try to plague the primary groups as they fear they may develop their own norms. They plague the groups by transferring them. But, this is harmful as it causes chaos and involves mob fury.

Hence, managers are advised

to develop a sense of ownership among primary groups.

• A primary group at max. has 5-7 members and they interact regularly. A primary group is formed when people with physical limitations meet.

• People say, "It is better to lead a primary group than to lead a mob".

Leadership — (Criteria)

(1) leadership is always based on situations. e.g. when ppl. find sb. suitable for a situatⁿ, they choose him as their lead.

(2) leaders evolve from a group when they satisfy group norms.

(3) A good leader will lead people with minimum time limits through medium of primary groups.

A good manager operates through primary groups.

(4) Halo effect — appearing to be divine.

e.g. a leader should use Halo effect i.e. a leader is democratic (NTR used this effect).

(3) Positioning —

It means reserving yourself a slot with certain characteristics in a given segment.

e.g. Maruti Stringray

Land Rover — counts on performance & speed.

Rolls Royce — counts on social status.

Mercedes — emphasis on design as well. Some car may harp on fuel η as well.

e.g. Colgate — tooth decay segment

Pepsodent — germ check.

So, toothpastes position ~~itself~~ themselves in segments as well.

(4) 4 P's of Marketing mix :

(1) Product

(2) Place

(3) Promotion

(4) Price

(1) Product:
* Unless you mix these 4 P's properly, success is a far-fetched dream.

* Customers are very choosy, cautious etc so we have to win from 8-dimensions —

(i) Strength

(i) Performance

(ii) Features {e.g. whether a walkman has bass, woofer,

(iv) Reliability — is measured through MTBF
i.e. Mean Time Between Failures

→ larger the MTBF, reliable is product

(v) Serviceability

means how easily you can access the customer care

(vi) MTTR — Mean Time To Repair i.e. how much time is required to bring a product back to work.

(vii) Aesthetics —

means the look, colour, dynamics of a product

(viii) Brand —

e.g. Raymond — The Complete Man

(viii) Warranty

These 8 dimensions come under product.

Note: Mercedes' latest ad campaign was 'The only sound you hear in our car is the tick of your watch'.

* If u say no too many times to a customer, u will lose his goodwill.
Your losses are:

- Tangible
- Intangible

Depending on your history of products breakdown, you must maintain optimal inventory amount.

* 'Inventory management' is, thus, a management which aims at managing too low & too high amt. of inventories

- Q1. What to buy?
Q2. How much to buy?
Q3. When to buy?
- } ques. for a factory

Solⁿ 1 - (i) We must see if it's cheaper to buy from market than making it in house.

e.g. bolts and nuts.

Mass productⁿ may make market products cheaper for you

- (i) You may get expertise in the market
- (ii) Maybe, you don't want to share

the secret formula of a product - making so you make it yourself

Solⁿ 2 : } Modelled by F.W. Harris in 1915
Solⁿ 3 : }

• He has come with a decision model of how much & when to buy to reduce the inventory cost.

- He called his model as EOQ model - Economic Order Quantity model
- His work was to arrive at an optimal frequency of buying
- His models were launched to make products simple and feasible.

His assumptions - {in EOQ model}

(1) Demand rate is constant

It is not possible in a real life situatⁿ & you can't keep inventory amt. as const.

(2) Lead time is constant :

It is the time gap when you order and when you actually get the material.

e.g. in India, it can't be kept const.

(3) No stock-outs :

It means there are ~~more~~ ^{no} situations of saying no to customers. If assumptⁿ 1 and 2 are true, the 3rd assumptⁿ will be true as well.

(4) No quantity discounts :

It means if more quantity is purchased, it won't affect discounts and discount is independent of quantity of products bought.
e.g. Buy 1 get 1 free.
In real life, we violate this assumptⁿ.

(5) Instantaneous Replenishment :

If you order 3000 units (say), all 3000 units shall come in one go and no instalment business should be entertained. However, in real life, we experience its violation.

(6) Only 1 item per order :

This rarely happens in practice as normally, we order 2 or 3 products from a supplier to save transport-ation cost as well.

These assumptions are like benchmarking & similar to Carnot cycle (ideal).

Carnot cycle

(1) It defines max. η for comparison of engine efficiencies.

6 Assumpt^{ns}

It defines maximum inventory & compare real life situations with it.

If 6 assumptions are assumed to be ideal, we have to figure out how much ~~the~~ we are deviating from ideal situatⁿ.

