

The Physiocrats thought there was a "Natural order" that allowed human beings to live together. Men did not come together via a somewhat arbitrary "social contract". Rather, we have to discover the laws of the natural order that will allow individuals to live in society without losing significant freedoms

CLASSICAL ECONOMICS (CLASSICALIST)

Classical economics, developed in the 18th and 19th centuries, included a value theory and distribution theory. The value of a product was thought to depend on the costs involved in producing that product. The explanation of costs in Classical economics was simultaneously an explanation of distribution. A landlord received rent, workers received wages, and a capitalist tenant farmer received profits on their investment. This classic approach included the work of Adam Smith and David Ricardo. The Classical Economists are Jeremy Bentham · Bernard Mandeville · John Ramsay McCulloch · Thomas Malthus · James Mill · John Stuart Mill · David Ricardo · Jean-Baptiste Say · Nassau William Senior · Jean Charles Léonard de Sismondi · Adam Smith · Johann Heinrich von Thünen.

The fundamental principle of the **classical theory** is that the economy is self-regulating. **Classical** economists maintain that the economy is always capable of achieving the natural level of real GDP or output, which is the level of real GDP that is obtained when the economy's resources are fully employed.

However, some economists gradually began emphasizing the perceived value of a good to the consumer. They proposed a theory that the value of a product was to be explained with differences in utility (usefulness) to the consumer. (In England, economists tended to conceptualize utility in keeping with the Utilitarianism of Jeremy Bentham and later of John Stuart Mill.)

The third step from political economy to economics was the introduction of marginalism and the proposition that economic actors made decisions based on margins. For example, a person decides to buy a second sandwich based on how full he or she is after the first one, a firm hires a new employee based on the expected increase in profits the employee will bring. This differs from the aggregate decision making of classical political economy in that it explains how vital goods such as water can be cheap, while luxuries can be expensive.

Classical economics is widely regarded as the first modern school of economic thought. Its major developers include Adam Smith, Jean-Baptiste Say, David Ricardo, Thomas Malthus, John Stuart Mill, David Hume, Alfred Marshall etc.

The Scottish philosopher David Hume was an early exponent of what was later known as monetary economics, and was an opponent of "mercantilism".

Mercantilist policy at the time, regulated trade in ways that subsidised exports so as to promote inflows of gold and silver, and restricted imports in order to discourage outflows.

Hume contested the mercantilist thesis, partly on the grounds that an inflow of money would cause inflation, and partly on the grounds that nations would benefit from the international specialisation that would result from the introduction of free trade. More generally, Hume argued that all government intervention in commerce tended to obstruct economic progress.

ASSUMPTIONS OF CLASSICAL ECONOMICS:

Classical economics, especially as directed toward macroeconomics, relies on three key **assumptions** –

1. Flexible prices
2. Say's law
3. Saving-investment equality.

1. **Flexible prices:** ensure that markets adjust to equilibrium and eliminate shortages and surpluses.

The first assumption of classical economics is that prices are flexible. Price flexibility means that markets are able to adjust quickly and efficiently to equilibrium. While this assumption does not mean that every market in the economy is in equilibrium at all times, any imbalance (shortage or surplus) is short lived. Moreover, the adjust to equilibrium is accomplished automatically through the market forces of demand and supply without the need for government action.

The most important macroeconomic dimension of this assumption applies to resource markets, especially labor markets. The unemployment of labor, particularly involuntary unemployment, arises if a surplus exists in labor markets. With a surplus, the quantity of labor supplied exceeds the quantity of labor demanded at the existing price of labor (wages). With flexible prices, any surplus is temporary. Wages fall to eliminate the surplus imbalance and restore equilibrium and achieve full employment.

If, for example, aggregate demand in the economy takes a bit of a drop (perhaps due to fewer exports of goods to other countries), then production also declines (temporarily) and so too does the demand for labor, creating a surplus of labor and involuntarily unemployed workers. However, flexible prices means that wages decline to eliminate the surplus.

2. **Say's law:** States that supply creates its own demand and means that enough income is generated by production to purchase the resulting production. The second assumption of classical economics is that the aggregate production of good and services in the economy generates enough income to exactly purchase all output. This notion commonly summarized by the phrase "supply creates its own demand" which is attributed to the Jean-Baptiste Say, a French economist who helped to popularize the work of Adam Smith in the early 1800s. Say's law was a cornerstone of classical economics, and although it was subject to intense criticism by Keynesian economists, it remains relevant in modern times and is reflected in the circular flow model.

Say's law is occasionally misinterpreted as applying to a single good, that is, the production of a good is ensured to be purchased by waiting buyers. That law actually applies to aggregate, economy-wide supply and demand. A more accurate phrase is "aggregate supply creates its own aggregate demand." This interpretation means that the act of production adds to the overall pool of aggregate income, which is then used to buy a corresponding value of production, although most likely not the original production.

This law, first and foremost, directed attention to the production or supply-side of the economy. That is, focus on production and the rest of the economy will fall in line. Say's law further implied that extended periods of excess production and limited demand, the sort of thing that might cause an economic downturn, were unlikely. Economic downturns could occur, but not due to the lack of aggregate demand.

3. **The saving-investment equality:** ensures that any income leaked from consumption into saving is replaced by an equal amount of investment.

The last assumption of classical economics is that saving by the household sector exactly matches investment expenditures on capital goods by the business sector. A potential problem with Say's law is that not all income generated by the production of goods is necessarily spent by the household sector on consumption demand--some income is saved.

In other words, while the production of \$100 million of output generates \$100 million of income, the household sector might choose to spend only \$90 million, directing the remaining \$10 million to saving. If so, then supply does NOT create its own demand. Supply falls \$10 million short of creating enough demand.

If this happens, then producers reduce production and lay off workers, which causes a drop in income and induces a decline in consumption, which then triggers further reductions in production, employment, income, and consumption in a contractionary downward spiral.

However, if this \$10 million of saving is matched by an equal amount of investment, then no drop off in aggregate demand occurs. Such a match between saving and investment is assured in classical economics through flexible prices. However, in this case price flexibility applies to interest rates. Should saving not match investment, then interest rates adjust to restore balance. In particular, if saving exceeds investment, then interest rates fall, which stimulates investment and curtails saving until the two are once again equal.

Although of questionable realism, these three assumptions imply that the economy would operate at full employment.

These three assumptions ensure that the macroeconomy would continue to produce the quantity of aggregate output that fully employs available resources. While a few resources might be temporarily unemployed, they would be quickly reemployed as resource prices (especially wages) adjust to equilibrium balance.

Keynesian Critique of the classical Economics Assumptions:

Keynesian economics was developed by John Maynard Keynes in 1936 during the depths of the Great Depression. Keynes promoted his new theory of macroeconomics in part by showing where the existing classical economics went wrong, especially why it was unable to explain the length and severity of the Great Depression. A discussion of each of the three assumptions of classical economics provides a bit of insight.

- **Flexible Prices:** First up is the classical proposition that wages and prices are flexible. Keynes argued that prices are really inflexible, especially in the downward direction. This inflexibility or rigidity of prices results because sellers, both output producers and resource owners, are unwilling or unable to accept lower prices. Inflexible prices thus prevent markets from eliminating shortages and surpluses. In particular, rigid wages allow a surplus of labor (that is, involuntary unemployment) to persist.
- **Say's Law:** Keynes was perhaps most critical of Say's law that supply creates its own demand. Keynes questioned whether or not supply does in fact create demand. While, in principle, revenue generated by production ultimately ends up as household income, this does not happen instantaneously. In the meantime, households can only spend the income that they actually have. If they have less income, then they spend less, less is sold, less is produced, and less revenue is generated.

- **Saving-Investment Equality:** The assumed equality between saving and investment was also criticized by Keynes. The lack of flexible prices might also prevent equilibrium in financial markets. Should interest rates not adjust, then saving might not match investment. Moreover, the attainment of equilibrium might actually require negative interest rates. Keynes suggested that interest rates were not the only or even most important factors affecting saving and investment. Factors such as a dismal outlook on the economy might reduce investment well below saving at any positive interest rate. As such, a disequilibrium in which saving exceeds investment means aggregate demand falls short of aggregate production and is just the sort of thing that would create a sustained depression.

These three critiques suggest why, contrary to the expectations of classical economics, high unemployment rates persisted during the Great Depression. Aggregate demand fell short of production, probably due to a lack of investment expenditures. Resource owners had less income and thus reduced their expenditures. Unemployment increased and the surplus of resources persisted because resource prices did not decline to restore balance.

The Classical Economic Model

If we had to apply the classical model principles to the global economy nowadays, it would be extremely difficult to make such simple assumptions really work. However, classical theorists like Pigou and Say were aware that a capitalist market economy could not self-adjust to the equilibrium point they described.

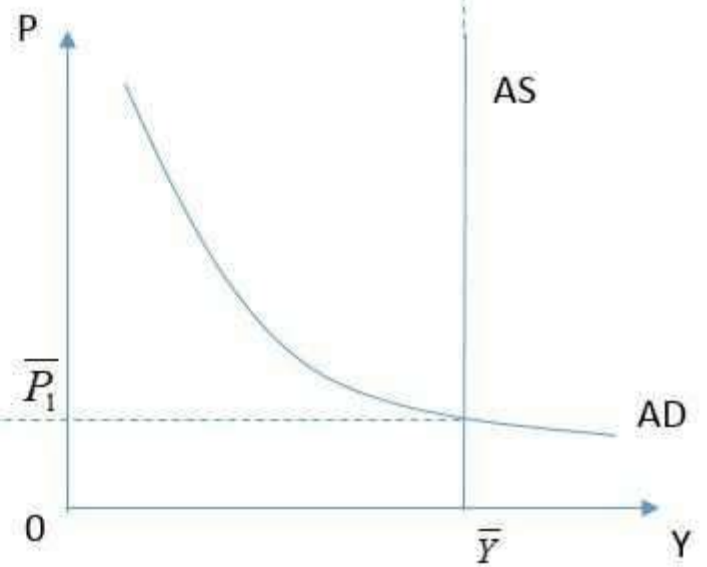
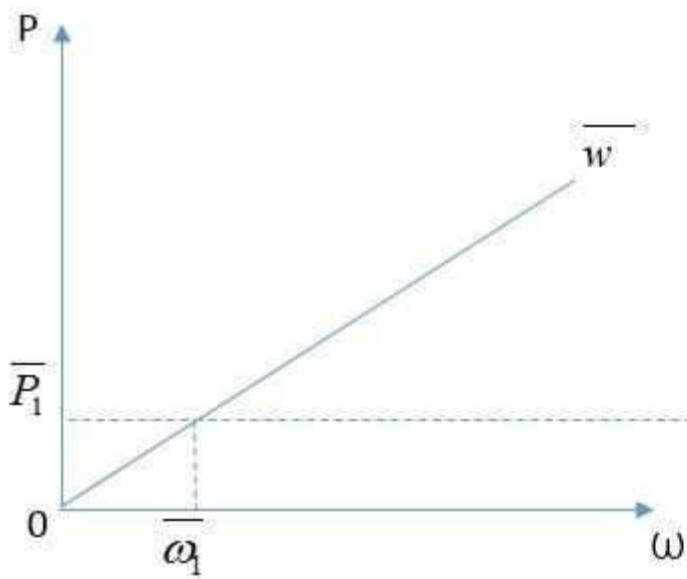
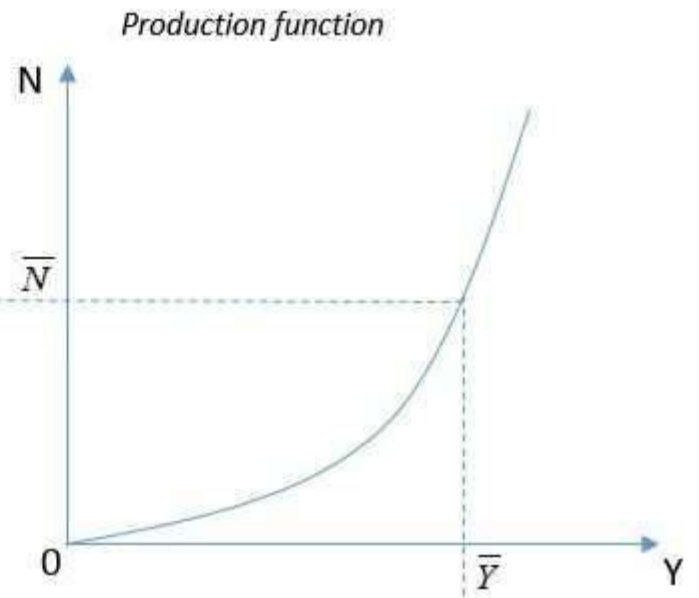
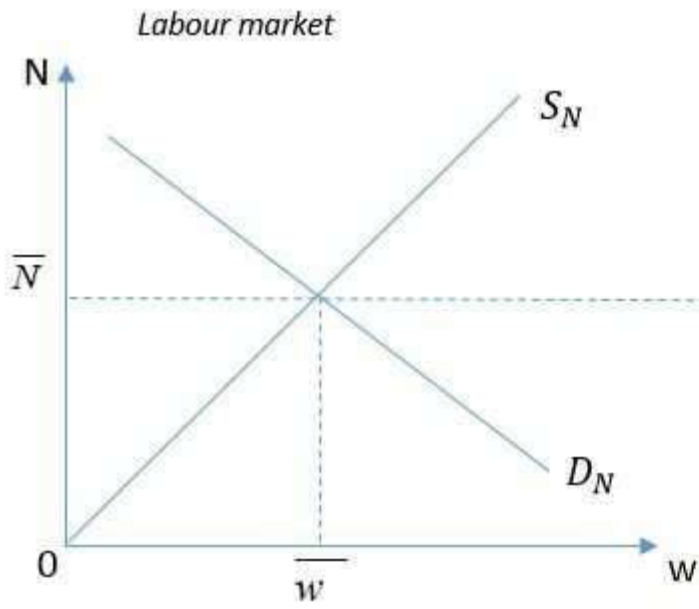
Nevertheless, their 'laissez-faire' economy still makes the subject of current discussions among policy makers. This only suggests that a non-interventionist economy might not be completely out fashioned.

Assumptions of the classical model:

A very brief version of the classical model starts from the following assumptions:

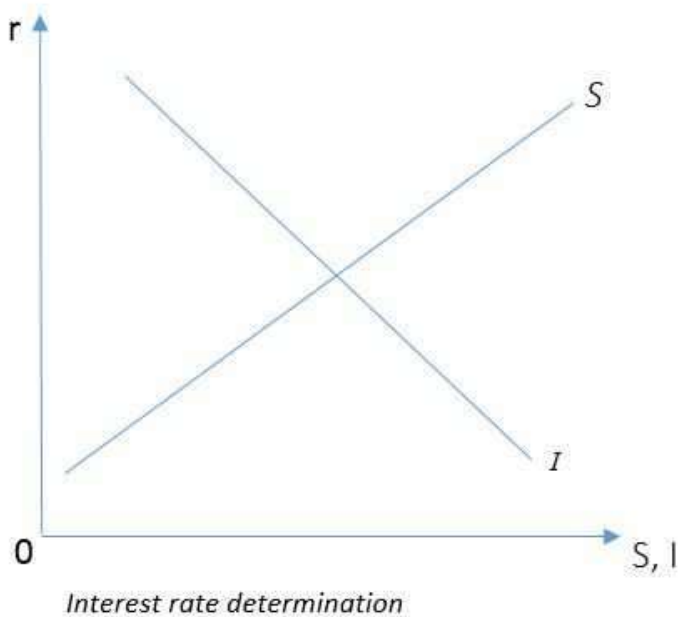
1. All economic agents can decide how much to buy or sell, in order to maximize their utility, as rational agents;
2. All economic agents have the same level of information regarding prices;
3. Prices are perfectly flexible which allows them to adjust until the market-clearing level;
4. There is a fictional Walrasian auctioneer who makes sure that no good is traded until the market-clearing price is agreed;
5. Agents have stable expectations.

Fig. 1



Nominal (money) wage determination

Aggregate demand and supply



- N = employment level
- W = real wage (nominal wage/price)
- S_n = labour supply
- D_n = labour demand
- Y = output (production)
- P = price level
- AS = aggregate supply
- AD = aggregate demand
- ω = nominal (money) wage
- r = interest rate
- S = savings
- I = investments

Mechanisms of the classical model:

Based on the assumptions of the classical model, all markets clear since prices are perfectly flexible and able to adjust until supply equals demand.

This is also valid for the labour market. Under the classical model frame, an increase in the money supply, for instance, does not alter real variables like employment level or real wage. Real wage, which we can of as the price of the labour market, will adjust until labour demand will be equal to labour supply. The only thing that will change is the level of nominal (money) wages and price level, as seen in Fig. 2.

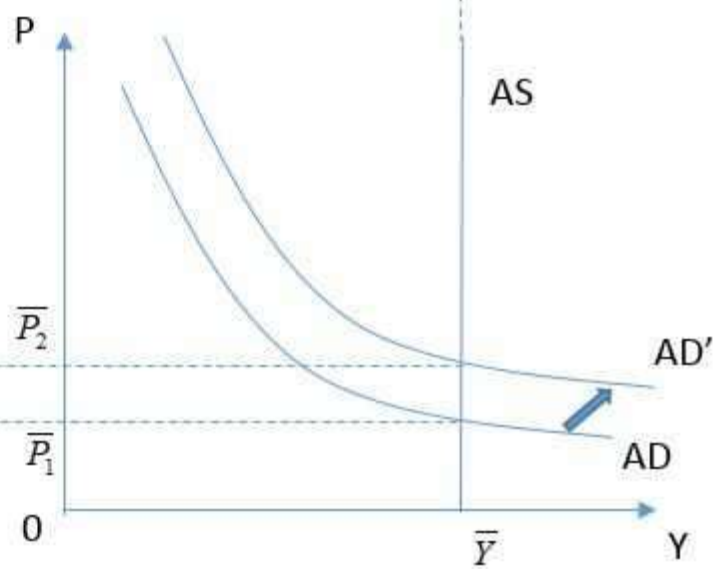
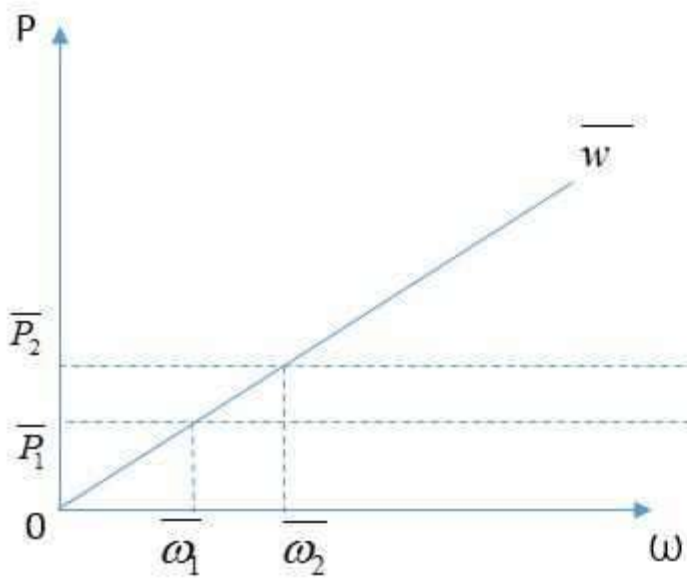
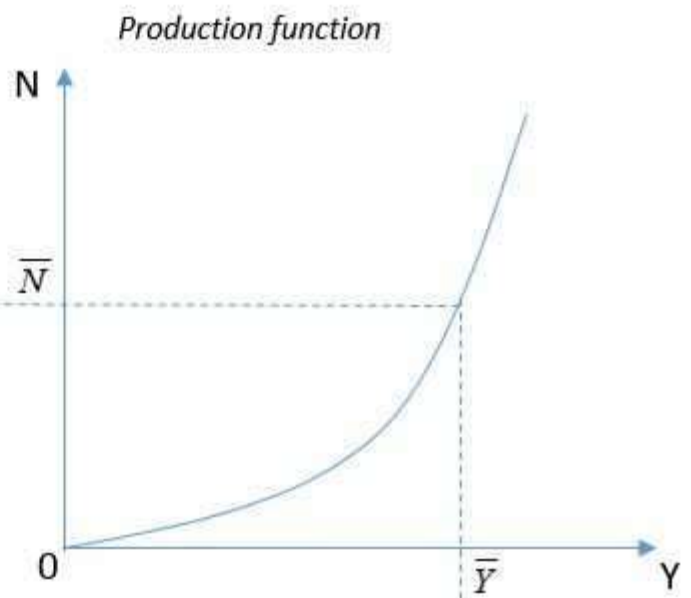
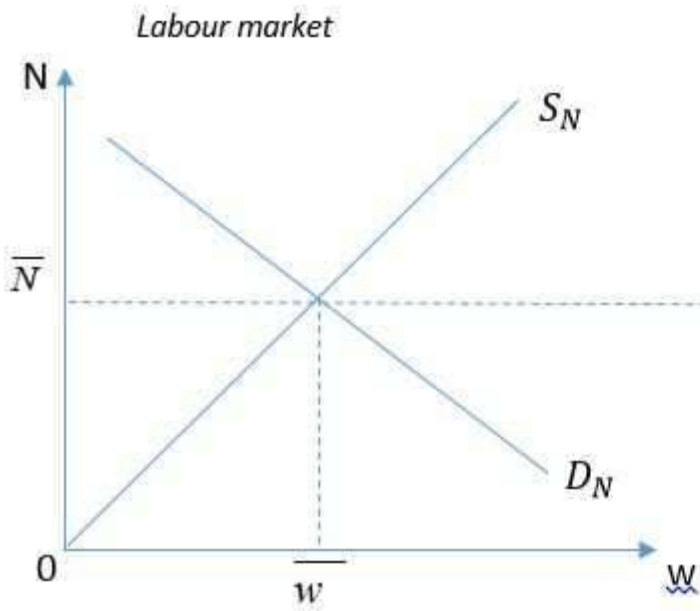
An increase in money supply, from M1 to M2 leads to a shift in the aggregate demand curve, from AD to AD'. This is because the classical model employs the Quantity Theory of Money: $MV = PY$, where M is the money supply, V is the velocity of money in circulation, P is the level of price and Y is the output. The Quantity Theory of Money, reinterpreted in the Cambridge approach, equates PY with the demand for money times the velocity of money, which can be aggregated under AD.

To come back to the previous point, when money supply increases, the aggregate demand curve will shift to the right. This will yield a higher price, but the aggregate supply is independent of the price level. Since prices are perfectly flexible, changes in the price level will be matched by corresponding changes in the nominal (money wage) to maintain the same market-clearing level of employment.

The new equilibrium will be reached at the same level of employment and same real wage, but at a higher price level and nominal wages. The fact that values of the real variables in the model are independent of the value of nominal money stock generates a paradox which is often called the **classical dichotomy**.

The last part of the classical model, the determination of the interest rate, is 'Say's law' which suggests that 'supply generates its own demand'. It shows that savings increase when the interest rate increases and that investments decrease when the interest rate decreases. Moreover, the market clears when savings equate investments. In our discussion about the impact of the money supply on the labour market and goods market, this last part can be omitted. Due to the classical dichotomy, a change in the money supply will not affect interest rates.

Fig. 2



How can the Classical Model be used today

At this point, it should be mentioned that the classical model was not held in its entirety by any economist. Therefore, even if economists and policy makers still refer to the classical model nowadays, the points being made refer to specific components of the classical model, taking in consideration only some assumptions.

Theorists of the classical model argued that the 'normal state' of the economy is the one at full employment. Hence, if unemployment arises, this is only because of market rigidities, like trade union pressures and minimum wage legislation. Although today's global economy is too complex to be looked at through 'the classics' glasses', discussions on balancing the power of trade unions in France and debates on removing the minimum wage in the U.S. make the model useful. Of course, the classical economic model should not be treated as anything else than a simplified tool to work with in solving more complex problems.

Classical Theory of Employment (With Diagram):

The word, classical economists, was first used by Karl Marx to define the thoughts and perceptions of various economics experts, such as Ricardo and Adam Smith.

On the other hand, Keynes considered classical economists as the followers of David Ricardo.

According to him, these followers were John Stuart Mill, Alfred Marshall, and Pigou.

Keynes was of the opinion that classical economics refers to traditional or conventional principles of economics. He also advocated that these classical principles were accepted by several renowned economists. In fact, Keynes himself acknowledged and taught these classical principles and rejected the principles of laissez-faire.

The classical economists did not propound any particular theory of employment. However, they have given a number of assumptions. There are two main assumptions of classical theory of employment, namely, assumption of full employment and flexibility of price and wages. Let us study these two broad features in detail.

Assumption of Full Employment:

In simpler terms, full employment refers to an economic condition in which every individual is employed. In economics terminology, full employment signifies the market condition where the demand for labor is equivalent to the supply of labor at every level of real wage. Therefore, full employment is the employment level at which every individual who desires to work at the prevalent wage rate gets employed.

Some of the definitions of full employment given by different economists are as follows:

According to Lerner, "Full employment is a situation in which all those who are able to and want to work at the existing rate of wage get work without any due difficulty."

According to Spencer, "Full employment is a situation in which everyone who wants to work is working except for those who fictionally and structurally unemployed."

The classical economists had a notion that labor and other resources are utilized completely or fully employed. According to classical economists, over-production is a general condition of an economy. Therefore, the condition of unemployment does not occur in the economy.

According to them, if the condition of unemployment occurs, it is a temporary or abnormal condition in the economy. In addition, classical economists also propounded that the condition of unemployment occurs due to the interference of government or private organizations in normal mechanism of market forces.

In addition, it can be due to wrong speculation of organizations regarding the economic condition. Therefore, classical economists considered that there would always be a condition of full employment in the economy.

According to classical economists, the laissez-faire approach of economy helps in adjusting employment and maintaining the full employment condition. The classical economists believed that full employment is dependent on various economic factors, such as perfect competition, objective of profit maximization, and mechanism of price.

The opinion of classical economists regarding full employment is not true. The condition of unemployment can also exist in the economy in the form of unfilled vacancies. According to modern theory of employment, the market is dynamic, thus, the demand and supply of labor changes, which would result in unemployment in an economy. In the condition of unemployment, individuals who desire to work may not get employed. Therefore, there would also be a condition of unemployment in case of full employment.

As a result, in modern economics, the definition of full employment has slightly distinguished from its previous version. Now, full employment refers to the state at which the vacancies and competent individuals are at equilibrium. In addition, a certain amount of unemployment also exists in the economy. Such unemployment is termed as natural rate of unemployment.

According to Rullin and Gregory, "The natural rate of unemployment is the rate of unemployment arising from normal labor market frictions that exist when the labor market is in equilibrium." The natural unemployment refers to frictional and structural unemployment. Therefore, we can conclude that full employment does not refer to the condition in which the unemployment is nil; however, it is a state of natural rate of unemployment.

According to Ward, "Full employment is the level of employment associated with a normal level of unemployment."

Flexibility of Price and Wages:

The classical economists believed that there is always a condition of full employment of resources in an economy. Besides this, they also advocated that the flexibility or adjustments in price of products and wages of individuals facilitate the condition of full employment.

For example, in case of over-production, the prices of products decrease, which further leads to an increase in demand and rate of consumption. Consequently, employment opportunities would increase and unemployment would eliminate.

The classical economists also propounded another approach of reducing unemployment, which signifies that the condition of full employment can be achieved by cutting down wages. This would result in increase in demand for labor and lead to the condition of full employment.

According to Pigou, "With perfectly free competition, there will always be at work a strong tendency for wage rates to be so related to demand that everybody is employed." Therefore, according to classical economists, the prices and wages adjust themselves to bring full employment in an economy.

Apart from aforementioned assumptions, which are assumption of full employment and flexibility of price and wages. **Another important basis for classical theory of employment is Say's Law.**

Say's Law:

Say's Law was given by J.B. Say, who was a French economist of early nineteenth century. With the help of this law, classical economists justified the assumption of full employment. In addition, Say's Law also helped

classical economists to believe that overproduction and unemployment are not possible in normal economic conditions.

This law was stringently followed by classical economists, such as Alfred Marshall and Pigou. According to J.B. Say, Supply creates its own demand." He also stated, "It is production which creates market for goods; for selling is at the same time buying and more of production, more of creating demand for other goods. Every producer finds a buyer." In simple terms, the supply of a product develops the demand for that product, which avoids the problem of over-production.

Therefore, according to Say's Law, there is very less possibility that there is no aggregate demand in the economy. He also stated that the demand for a product is originated from the income earned by the factor of production involved in the production of the product.

When a new factor is added to the production, it increases the demand for the product, which would cause simultaneous increase in the supply of that product. Therefore, it can be concluded that production is responsible for the demand for a product.

According to David Ricardo, an important classical economist, "No man produces but with a view to consume or sell, and he never sells but with a view to consume or sell, and he never sells but with an intention to purchase some other commodity which may be useful to him or which contributes to future production."

As per James Mill, "Consumption is co-extensive with production."

Therefore, the supply of a product develops an equal and immediate demand of its own. The supply produces income in the form of wages, interest and profit. The purchasing power of labor results in the increase of demand and consumption of product and services. Therefore, the aggregate supply gets equal to the aggregate demand. This reduces the possibility of overproduction in the economy.

Basic Assumptions of Say's Law:

Every law is based on certain assumptions. These assumptions are required for the effective implication of laws. In case the assumptions are not satisfied in a particular situation, then the law would not hold true. Therefore, in Say's Law, there are certain assumptions that need to be satisfied for its proper application.

The basic assumptions of Say's law are as follows:

- a. Requires a perfectly competitive market and free exchange economy for the application of Say's Law
- b. Assumes that all the saving is invested and income is spend immediately
- c. Assumes that the flexibility in interest rate makes the saving and investment equal
- d. Assumes that the government intervention is nil in the market, which implies that there is no government expenditure government revenue, taxation, and subsidies
- e. Decides and limits the market size on the basis of production volume of an organization that makes aggregate demand equal to
- f. Requires a closed economy for the application of the law

Another classical theory of employment was given by Pigou.

Implications of Say's Law:

From the discussion of Say's law so far in the above, there can be certain implication of the law.

Some of the implications of Say's Law are discussed in the following points:

(a) Self-adjusting economy:

Assumes that market forces adjust themselves for the stabilization of an economy and do not require any controlling authority for this purpose. Say's Law also assumes that in a self-adjusting economy, the condition of disequilibrium is momentary or for a shorter duration of time and the condition of equilibrium persists.

For example, if there is a condition of over-production, then prices would fall, which would automatically lead to increase in demand. Consequently, the problem of surplus of products would solve and demand and supply would remain equal. Such a condition is termed as equilibrium condition.

Similarly, in the condition of unemployment, wages would fall. In such a case, it would be beneficial for organizations to hire more labor to reduce unemployment. In this manner, an economy can adjust itself without any controlling units.

(b) Laissez-faire Approach:

States that there is no interference of the government in the economic activity. The law assumes that if government intervenes in the self-adjusting economy, then it would create the state of disequilibrium.

In the absence of government intervention, the condition of disequilibrium would be for a shorter duration and tend to be solved by the free implication of market forces. Therefore, government should not create hurdles in the normal working of an economy.

(c) Over-production:

Assumes that the condition of over-production does not exist in an economy in general. This is because of the reason that if there is over-production, then the prices would fall immediately and the demand would increase without any time lag.

As a result, the surplus of products would disappear from the market. According to the law, over-production may arise in an industry in specific conditions, which is also not permanent and can be resolved by market forces.

(d) Unemployment:

Concludes that the condition of unemployment cannot exist in normal economic conditions. This is because as the unemployment arises, wages would fall. In such a case, organizations would prefer to hire new employees, which would result in eliminating unemployment.

The law also assumes that there should neither be any intervention of government to regulate the rate of wages nor any role of trade unions. According to Say's Law, the condition of unemployment exists only under some specific conditions, but this condition is momentary.

(e) Money Supply:

Assumes that whole income is spent on consumer goods and the whole amount of savings is invested immediately. Thus, money comes back to organizations only. According to Say's Law, there is always a closed economy and there is no interference of government, such as subsidies, taxes, and tariffs.

(f) Limitless Productive Activities:

Assumes that the productive activities in an economy are limitless. In simple terms, the activities related to economic development can be performed to any extent as aggregate demand cannot be nil. This leads to unlimited economic development opportunities for under-developed countries.

Concept of Equality of Savings and Investment:

According to Say's Law, there would always be a certain amount of total spending for keeping the available resources fully employed. The income generated by various factors of production is spent on consumer goods. In addition, some part of this income is also saved.

However, according to classical economists, the amount of saving is utilized for investment purposes. This is because of the reason that saving and investment are equal and are interchangeable concepts. It helps in maintaining the flow of income in an economy. As a result, supply of a product is able to create demand for the product.

The assumptions of classical theory of employment with respect to the concept of savings and investment are as follows:**(a) Flexibility in Interest Rate:**

Assumes that rate of interest is directly affected by the supply of saving and inversely affected by the demand of investment. According to classical economists, the fluctuations in the economy can be managed by market forces themselves to bring the economy back at equilibrium position.

The relationship between the rate of interest (ROI) and the demand of investment (I) is shown in Figure-1:

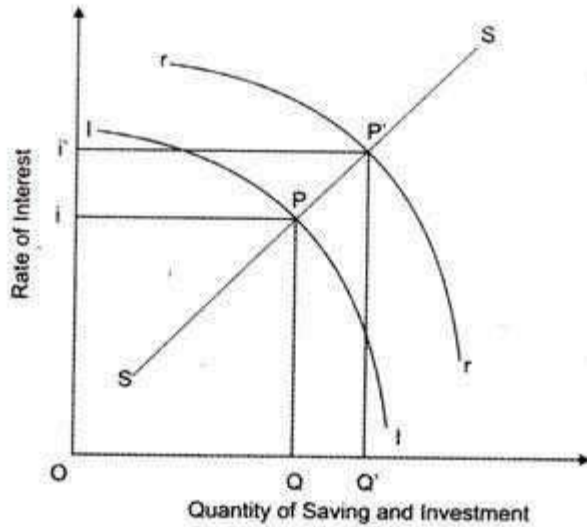


Figure-1: Relationship between Rate of Interest and Investment

In Figure-1, II represents the demand of investment while SS represents the supply of saving. At point P, II intersects SS, which implies that demand of investment gets equal to the supply of saving. Therefore, P is the point of equilibrium at which the interest rate is O_i with the investment and saving quantity of OQ .

When the investment increases to I' , then the rate of interest becomes O_i' and economy reaches to new equilibrium point that is P' . Therefore, it can be concluded that economy would always be in equilibrium and there would be no situation of unemployment in the economy. In addition, the rate of interest helps in bringing back the equilibrium condition of an economy when there is a gap between savings and investment.

(b) Flexibility in Wage Rate:

Assumes that full employment condition can be achieved by cutting down the wage rate. Unemployment would be eliminated when wages are determined by the mechanism of economy itself.

Figure-2 shows the relationship between wage rate and employment:

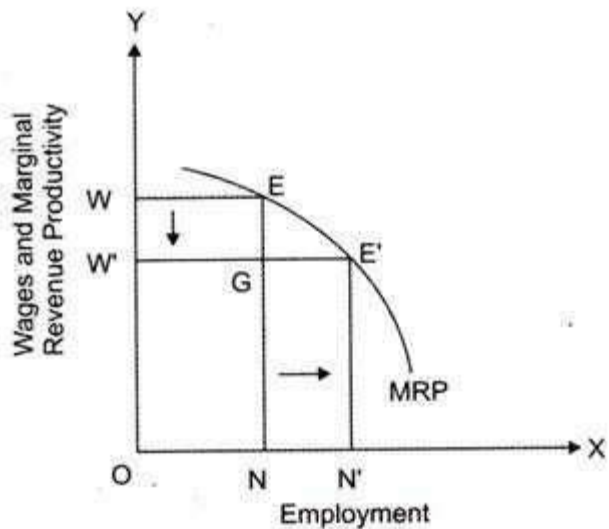


Figure-2: Relationship between Wage Rate and Employment

In Figure-2, when the wage rate is OW , then the employment is ON . As the wage rate is reduced to OW' , then the employment has increased to ON' . Prof. Pigou has taken this theory as base for developing the solution of unemployment problem.

(c) Balanced Budget:

Assumes that the intervention of government in economic activities should be negligible. In addition, the government should balance its income and expenditure. The classical economists advocated that the government should follow the laissez-faire approach of economy.

Criticism of Classical Theory:

Several economists have criticized the classical theory of employment.

The main points of criticism of classical theories are as follows:

- States that supply creates its own demand that is not possible if certain part of income is saved and aggregate revenue is not always equal to aggregate cost
- Considers that the employment can be increased by decreasing the wage rate, which is not true in the real world
- Assumes that rate of interest helps in maintaining equilibrium between savings and investments, which is not true in practical applications
- Infers that the economy can be adjusted on its own and it does not require any government intervention, which is not possible
- Considers that the wages and prices are very much flexible, which is not true in the real world economy
- Regards money as a medium of exchange only; however, money plays an important role in the economy

g. Fails to explain the occurrence of trade cycles.

Richard Cantillon:

Richard Cantillon (French 1680 – May 1734) He was born at County Kerry, Ireland in 1680. He died at London in 1734. He was a political economist. He was an Irish-French economist in the era of the age of reasoning and author of *Essai sur la Nature du Commerce en Général* (*Essay on the Nature of Trade in General*), a book considered by William Stanley Jevons to be the "cradle of political economy". Although little information exists on Cantillon's life, it is known that he became a successful banker and merchant at an early age. His success was largely derived from the political and business connections he made through his family and through an early employer, James Brydges.

During the late 1710s and early 1720s, Cantillon speculated in, and later helped fund, John Law's Mississippi Company, from which he acquired great wealth. However, his success came at a cost to his debtors, who pursued him with lawsuits, criminal charges, and even murder plots until his death in 1734.

Essai remains Cantillon's only surviving contribution to economics. It was written around 1730 and circulated widely in manuscript form, but was not published until 1755. His work was translated into Spanish by Gaspar Melchor de Jovellanos, probably in the late 1770s, and considered essential reading for political economy. Despite having much influence on the early development of the physiocrat and classical schools of thought, *Essai* was largely forgotten until its rediscovery by Jevons in the late 19th century. Cantillon was influenced by his experiences as a banker, and especially by the speculative bubble of John Law's Mississippi Company. He was also heavily influenced by prior economists, especially William Petty.

Essai is considered the first complete treatise on economics, with numerous contributions to the science. These contributions include: his cause and effect methodology, monetary theories, his conception of the entrepreneur as a risk-bearer, and the development of spatial economics. Cantillon's *Essai* had significant influence on the early development of political economy, including the works of Adam Smith, Anne Turgot, Jean-Baptiste Say, Frédéric Bastiat and François Quesnay.

Richard Cantillon notable ideas are entrepreneur as risk-bearer, monetary theory, spatial economics, theory of population growth, cause and effect methodology

Richard Cantillon's Contribution to Economics:

Although there is evidence that Richard Cantillon wrote a wide variety of manuscripts, only his *Essai Sur La Nature Du Commerce En Général* (abbreviated *Essai*) survives. Written in 1730, it was published in French in 1755, and was translated into English by Henry Higgs in 1932. Evidence suggests that *Essai* had tremendous influence on the early development of economic science. However, Cantillon's treatise was largely neglected during the 19th century.

In the late 19th century and it was "rediscovered" by William Stanley Jevons, who considered it the "cradle of political economy". Since then, Cantillon's *Essai* has received growing attention. *Essai* is considered the first complete treatise on economic theory, and Cantillon has been called the "father of enterprise economics"

One of the greatest influences on Cantillon's writing was English economist William Petty and his 1662 tract *Treatise on Taxes*. Although Petty provided much of the groundwork for Cantillon's *Essai*, Anthony Brewer argues that Petty's influence has been overstated.

Apart from Petty, other possible influences on Cantillon include John Locke, Cicero, Livy, Pliny the Elder, Pliny the Younger, Charles Davenant, Edmond Halley, Isaac Newton, Sébastien Le Prestre de Vauban, and Jean Boisard. Cantillon's involvement in John Law's speculative bubble proved invaluable and likely heavily influenced his insight on the relationship between increases in the supply of money, price, and production.

Cantillon was the first to introduce the term in *Essai*. Cantillon divided society into two principal classes—fixed income wage-earners and non-fixed income earners. Entrepreneurs, according to Cantillon, are non-fixed income earners who pay known costs of production but earn uncertain incomes, due to the speculative nature of pandering to an unknown demand for their product.

Cantillon, while providing the foundations, did not develop a dedicated theory of uncertainty—the topic was not revisited until the 20th century, by Ludwig von Mises, Frank Knight, and John Maynard Keynes, among others. Furthermore, unlike later theories of entrepreneurship which saw the entrepreneur as a disruptive force, Cantillon anticipated the belief that the entrepreneur brought equilibrium to a market by correctly predicting consumer preferences.

Spatial economics deal with distance and area, and how these may affect a market through transportation costs and geographical limitations. The development of spatial economics is usually ascribed to German economist Johann Heinrich von Thünen; however, Cantillon addressed spatial economics nearly a century earlier.

Cantillon integrated his advancements in spatial economic theory into his microeconomic analysis of the market, describing how transportation costs influence the location of factories, markets and population centres—that is, individuals strive to lower transportation costs. Conclusions on spatial economics were derived from three premises: cost of raw materials of equal quality will always be higher near the capital city, due to transportation costs; transportation costs vary on transportation type (for example, water transportation was considered cheaper than land-based transportation); and larger goods that are more difficult to transport will always be cheaper closer to their area of production. For example, Cantillon believed markets were designed as they were to decrease costs to both merchants and villagers in terms of time and transportation.

Similarly, Cantillon posited that the locations of cities were the result in large part of the wealth of inhabiting property owners and their ability to afford transportation costs—wealthier property owners tended to live farther from their property, because they could afford the transportation costs. In *Essai*, spatial economic theory was used to derive why markets occupied the geographical area they did and why costs varied across different markets

Cantillon Entrepreneurship:

One of Cantillon's remarkable contributions to economic thought is that he was the first to stress and analyse the entrepreneur. To this real-world merchant, banker and speculator, it would have been inconceivable to fall into the Ricardian, Walrasian and neoclassical trap of assuming that the market is characterized by perfect knowledge and a static world of certainty.

The real-world marketplace is permeated by uncertainty, and it is the function of the businessman, the 'undertaker', the entrepreneur, to meet and bear that uncertainty by investing, paying expenses and then hoping for a profitable return. Profits, then, are a reward for successful forecasting, for successful uncertainty-bearing, in the process of production. The crucial Smithian-Ricardian and Walrasian (classical and neoclassical) assumption that the economy is perpetually in a state of long-run equilibrium fatally rules out the real world of uncertainty. Instead, it focuses on a never-never land of no change, and hence of perfect certainty and perfect knowledge of present

and

future.

Thus Cantillon divides producers in the market economy into two classes: 'hired people' who receive fixed wages, or fixed land rents, and entrepreneurs with non-fixed, uncertain returns. The farmer-entrepreneur bears the risk of fixed costs of production and of uncertain selling prices, while the merchant manufacturer pays similar fixed costs and relies on an uncertain return. Except for those who only sell 'their own labour', business entrepreneurs must lay out monies which, after they have done so, are 'fixed' or given from their point of view. Since sales and selling prices are uncertain and not fixed, their business income becomes an uncertain residual.

Cantillon also sees that the pervasive uncertainty borne by the entrepreneurs is partly the consequence of a decentralized market. In a world of one monopoly owner, the owner himself decides upon prices and production, and there is little entrepreneurial uncertainty. But in the real world, the decentralized entrepreneurs face a great deal of uncertainty and must bear its risks. For Cantillon, competition and entrepreneurship go hand in hand.

As in the case of Frank Knight and the modern Austrians, Cantillon's theory of entrepreneurship focuses on his function, his role as uncertainty-bearer in the market, rather than, as in the case of Joseph Schumpeter, on facets of his personality.

Cantillon's concept also anticipates von Mises and the modern Austrians in another respect: his entrepreneur performs not a disruptive (as in Schumpeter) but an equilibrating function, that is, by successfully forecasting and investing resources in the future, the entrepreneur helps adjust and balance supply and demand in the various markets.

David Hume:

David Hume was a Scottish philosopher, historian, economist, and essayist, who is best known today for his highly influential system of radical philosophical empiricism, skepticism, and naturalism. He was born May 7th, 1711 at Edinburgh, United Kingdom. He died August 25th, 1776 at Edinburgh, United Kingdom. David Hume influenced Adam Smith, Noam Chomsky and Thomas Reid. He was influenced by John Locke, Rene Descartes, Thomas Hobbes and scholars.

David Hume was the second of two sons born to Joseph Home of Ninewells, an advocate, and his wife The Hon. Katherine (*née* Falconer), daughter of Sir David Falconer, 5th Lord Falconer of Halkerton. He was born on 26 April 1711 (Old Style) in a tenement on the north side of the Lawnmarket in Edinburgh. Hume's father died when he was a child, just after the author's second birthday, and he was raised by his mother, who never remarried.

He changed the spelling of his name in 1734, because of the fact that his surname *Home*, pronounced *Hume*, was not known in England. Throughout his life Hume, who never married, spent time occasionally at his family home at Ninewells in Berwickshire, which had belonged to his family since the sixteenth century. His finances as a young man were very "slender". His family was not rich and, as a younger son, he had little patrimony to live on. He was therefore forced to make a living somehow.

Hume attended the University of Edinburgh at the unusually early age of twelve (possibly as young as ten) at a time when fourteen was normal. At first, because of his family, he considered a career in law, but came to have, in his words, "an insurmountable aversion to everything but the pursuits of Philosophy and general Learning; and while [my family] fancied I was poring over Voet and Vinnius, Cicero and Virgil were the Authors which I was secretly devouring". He had little respect for the professors of his time, telling a friend in 1735 that "there is nothing to be learnt from a Professor, which is not to be met with in Books". Hume did not graduate.

Aged around 18, he made a philosophical discovery that opened up to him "a new Scene of Thought", which inspired him "to throw up every other Pleasure or Business to apply entirely to it". He did not recount what this scene was, and commentators have offered a variety of speculations.

David Hume Contributions to economic thought:

Through his discussions on politics, Hume developed many ideas that are prevalent in the field of economics. This includes ideas on private property, inflation, and foreign trade. Referring to his essay "Of the Balance of Trade", economist Paul Krugman has remarked that "David Hume created what I consider the first true economic model."

In contrast to Locke, Hume believes that private property is not a natural right. Hume argues it is justified, because resources are limited. Private property would be an unjustified, "idle ceremonial", if all goods were unlimited and available freely. Hume also believed in an unequal distribution of property, because perfect equality would destroy the ideas of thrift and industry. Perfect equality would thus lead to impoverishment.

Due to Hume's vast influence on contemporary philosophy, a large number of approaches in contemporary philosophy and cognitive science are today called "Humean."

Epistemological Issues

Much of Hume's epistemology is driven by a consideration of philosophically important issues, such as space and time, cause-effect, external objects, personal identity, and free will. In his analysis of these issues in the *Treatise*, he repeatedly does three things;

1. He skeptically argues that we are unable to gain complete knowledge of some important philosophical notion under consideration.
2. He shows how the understanding gives us a very limited idea of that notion.
3. He explains how some erroneous views of that notion are grounded in the fancy, and he accordingly recommends that we reject those erroneous ideas. We will follow this three-part scheme as we consider Hume's discussions of various topics.

a. Space

On the topic of space, Hume argues that our proper notions of space are confined to our visual and tactile experiences of the three-dimensional world, and we err if we think of space more abstractly and independently of those visual and tactile experiences.

In essence, our proper notion of space is like what Locke calls a "secondary quality" of an object, which is spectator dependent, meaning grounded in the physiology of our perceptual mental processes. Thus, our proper notion of space is not like a "primary quality" that refers to some external state of affairs independent of our perceptual mental process. Following the above three-part scheme;

- (1) Hume skeptically argues that we have no ideas of infinitely divisible space (*Treatise*, 1.2.2.2).

(2) When accounting for the idea we do have of space, he argues that “the idea of space is convey’d to the mind by two senses, the sight and touch; nor does anything ever appear extended, that is not either visible or tangible” (*Treatise*, 1.2.3.15). Further, he argues that these objects—which are either visible or tangible—are composed of finite atoms or corpuscles, which are themselves “endow’d with colour and solidity.” These impressions are then “comprehended” or conceived by the imagination; it is from the structuring of these impressions that we obtain a limited idea of space.

(3) In contrast to this idea of space, Hume argues that we frequently presume to have an idea of space that lacks visibility or solidity. He accounts for this erroneous notion in terms of a mistaken association that people naturally make between visual and tactile space (*Treatise*, 1.2.5.21).

b. Time

Hume’s treatment of our idea of time is like his treatment of the idea of space, in that our proper idea of time is like a secondary quality, grounded in our mental operations, not a primary quality grounded in some external phenomenon beyond our experience.

(1) He first maintains that we have no idea of infinitely divisible time (*Treatise*, 1.2.4.1).

(2) He then notes Locke’s point that our minds operate at a range of speeds that are “fix’d by the original nature and constitution of the mind, and beyond which no influence of external objects on the senses is ever able to hasten or retard our thought” (*Treatise*, 1.2.3.7). The idea of time, then, is not a simple idea derived from a simple impression; instead, it is a copy of impressions as they are perceived by the mind at its fixed speed (*Treatise*, 1.2.3.10).

(3) In contrast to this limited view of time, he argues that we frequently entertain a faulty notion of time that does not involve change or succession. The psychological account of this erroneous view is that we mistake time for the cause of succession instead of seeing it as the effect (*Treatise*, 1.2.5.29).

c. Necessary Connection between Causes and Effects

According to Hume, the notion of cause-effect is a complex idea that is made up of three more foundational ideas: priority in time, proximity in space, and necessary connection. Concerning priority in time, if I say that event A causes event B, one thing I mean is that A occurs prior to B. If B were to occur before A, then it would be absurd to say that A was the cause of B. Concerning the idea of proximity, if I say that A causes B, then I mean that B is in proximity to, or close to A. For example, if I throw a rock, and at that moment someone’s window in China breaks, I would not conclude that my rock broke a window on the other side of the world.

The broken window and the rock must be in proximity with each other. Priority and proximity alone, however, do not make up our entire notion of causality. For example, if I sneeze and the lights go out, I would not conclude that my sneeze was the cause, even though the conditions of priority and proximity were fulfilled. We also believe that there is a necessary connection between cause A and effect B. During the modern period of philosophy, philosophers thought of necessary connection as a power or force connecting two events. When billiard ball A strikes billiard ball B, there is a power that the one event imparts to the other.

In keeping with his empiricist copy thesis, that all ideas are copied from impressions, Hume tries to uncover the experiences which give rise to our notions of priority, proximity, and necessary connection. The first two are easy to explain. Priority traces back to our various experiences of time. Proximity traces back to our

various experiences of space. But what is the experience which gives us the idea of necessary connection? This notion of necessary connection is the specific focus of Hume's analysis of cause-effect.

Hume's view is that our proper idea of necessary connection is like a secondary quality that is formed by the mind, and not, like a primary quality, a feature of the external world.

(1) He skeptically argues that we cannot get an idea of necessary connection by observing it through sensory experiences (*Treatise*, 1.3.14.12). We have no external sensory impression of causal power when we observe cause-effect relationships; all that we ever see is cause A constantly conjoined with effect B. Neither does it arise from an internal impression, such as when we introspectively reflect on willed bodily motions or willing the creation of thoughts. These internal experiences are too elusive, and nothing in them can give content to our idea of necessary connection.

(2) The idea we have of necessary connection arises as follows: we experience a constant conjunction of events A and B— repeated sense experiences where events resembling A are always followed by events resembling B. This produces a habit such that upon any further appearance of A, we expect B to follow. This, in turn, produces an internal feeling of expectation "to pass from an object to the idea of its usual attendant," which is the impression from which the idea of necessary connection is copied (*Treatise*, 1.3.14.20).

(3) A common but mistaken notion on this topic is that necessity resides within the objects themselves. He explains this mistaken belief by the natural tendency we have to impute subjectively perceived qualities to external things (*Treatise*, 1.3.14.24).

d. External Objects

Hume's view on external objects is that the mind is programmed to form some concept of the external world, although this concept or idea is really just a fabrication.

(1) Hume's skeptical claim here is that we have no valid conception of the existence of external things (*Treatise*, 1.2.6.9).

(2) Nevertheless, he argues that we have an unavoidable "vulgar" or common belief in the *continued* existence of objects, and this idea he accounts for. His explanation is lengthy, but involves the following features. Perceptions of objects are disjointed and have no unity in and of themselves (*Treatise*, 1.4.2.29). In an effort to organize our perceptions, we first naturally assume that there is no distinction between our perceptions and the objects that are perceived (this is the so-called "vulgar" view of perception). We then conflate all ideas (of perceptions), which put our minds in similar dispositions (*Treatise*, 1.4.2.33); that is, we associate resembling ideas and attribute identity to their causes. Consequently, we naturally invent the continued and external existence of the objects (or perceptions) that produced these ideas (*Treatise*, 1.4.2.35). Lastly, we go on to *believe* in the existence of these objects because of the force of the resemblance between ideas (*Treatise*, 1.4.2.36). Although this belief is philosophically unjustified, Hume feels he has given an accurate account of how we inevitably arrive at the idea of external existence.

(3) In contrast to the previous explanation of this idea, he recommends that we doubt a more sophisticated but erroneous notion of existence—the so-called philosophical view—which distinguishes between perceptions and the external objects that cause perceptions. The psychological motivation for accepting this view is this: our imagination tells us that resembling perceptions have a continued existence, yet our reflection tells us that they are interrupted. Appealing to both forces, we ascribe interruption to perceptions and continuance to objects (*Treatise*, 1.4.2.52).

e. Personal Identity

Regarding the issue of personal identity;

(1) Hume's skeptical claim is that we have no experience of a simple, individual impression that we can call *the self*—where the "self" is the totality of a person's conscious life. He writes, "For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe anything but the perception" (*Treatise*, 1.4.6.3).

(2) Even though my perceptions are fleeting and I am a bundle of different perceptions, I nevertheless have some idea of personal identity, and that must be accounted for (*Treatise*, 1.4.6.4). Because of the associative principles, the resemblance or causal connection within the chain of my perceptions gives rise to an idea of myself, and memory extends this idea past my immediate perceptions (*Treatise*, 1.4.6.18).

(3) A common abuse of the notion of personal identity occurs when the idea of a soul or unchanging substance is added to give us a stronger or more unified concept of the self (*Treatise*, 1.4.6.6).

f. Free Will

On the issue of free will and determinism—or "liberty" and "necessity" in Hume's terminology—Hume defends necessity;

(1) He first argues that "all actions of the will have particular causes" (*Treatise*, 2.3.2.8), and so there is no such thing as an uncaused willful action.

(2) He then defends the notion of a will that consistently responds to prior motivational causes: "our actions have a constant union with our motives, tempers, and circumstances" (*Treatise*, 2.3.1.4). These motives produce actions that have the same causal necessity observed in cause-effect relations that we see in external objects, such as when billiard ball A strikes and moves billiard ball B. In the same way, we regularly observe the rock-solid connection between motive A and action B, and we rely on that predictable connection in our normal lives.

Suppose that a traveler, in recounting his observation of the odd behavior of natives in a distant country, told us that identical motives led to entirely different actions among these natives. We would not believe the traveler's report. In business, politics, and military affairs, our leaders expect predictable behavior from us insofar as the same motives within us will always result in us performing the same action. A prisoner who is soon to be executed will assume that the motivations and actions of the prison guards and the executioner are so rigidly fixed that these people will mechanically carry out their duties and perform the execution, with no chance of a change of heart (*Treatise*, 2.3.1.5).

(3) Lastly, Hume explains why people commonly believe in an uncaused will (*Treatise*, 2.3.2.1). One explanation is that people erroneously believe they have a feeling of liberty when performing actions. The reason is that, when we perform actions, we feel a kind of "looseness or indifference" in how they come about, and some people wrongly see this as "an intuitive proof of human liberty" (*Treatise*, 2.3.2.2).

In the *Treatise* Hume rejects the notion of liberty completely. While he gives no definition of "liberty" in that work, he argues that the notion is incompatible with necessity, and, at best, "liberty" simply means chance. In the *Enquiry*, however, he takes a more compatibilist approach. All human actions are caused by specific prior motives, but liberty and necessity are reconcilable when we define liberty as "a power of acting or not

acting, according to the determinations of the will" (*Enquiry*, 8). Nothing in this definition of liberty is in conflict with the notion of necessity.

4. Skepticism

In all of the above discussions on epistemological topics, Hume performs a balancing act between making skeptical attacks (step 1) and offering positive theories based on natural beliefs (step 2). In the conclusion to Book 1, though, he appears to elevate his skepticism to a higher level and exposes the inherent contradictions in even his best philosophical theories.

He notes three such contradictions. One centers on what we call induction. Our judgments based on past experience all contain elements of doubt; we are then impelled to make a judgment about that doubt, and since this judgment is also based on past experience it will in turn produce a new doubt. Once again, though, we are impelled to make a judgment about this second doubt, and the cycle continues. He concludes that "no finite object can subsist under a decrease repeated *in infinitum*." A second contradiction involves a conflict between two theories of external perception, each of which our natural reasoning process leads us to.

One is our natural inclination to believe that we are directly seeing objects as they really are, and the other is the more philosophical view that we only ever see mental images or copies of external objects. The third contradiction involves a conflict between causal reasoning and belief in the continued existence of matter. After listing these contradictions, Hume despairs over the failure of his metaphysical reasoning:

The *intense* view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another [*Treatise*, 1.4.7.8].

He then pacifies his despair by recognizing that nature forces him to set aside his philosophical speculations and return to the normal activities of common life. He sees, though, that in time he will be drawn back into philosophical speculation in order to attack superstition and educate the world.

Hume's emphasis on these conceptual contradictions is a unique aspect of his skepticism, and if any part of his philosophy can be designated "Humean skepticism" it is this. However, during the course of his writing the *Treatise* his view of the nature of these contradictions changed. At first he felt that these contradictions were restricted to theories about the external world, but theories about the mind itself would be free from them, as he explains here:

The essence and composition of external bodies are so obscure, that we must necessarily, in our reasonings, or rather conjectures concerning them; involve ourselves in contradictions and absurdities. But as the perceptions of the mind are perfectly known, and I have us'd all imaginable caution in forming conclusions concerning them, I have always hoped to keep clear of those contradictions, which have attended every other system [*Treatise*, 2.2.6.2].

When composing the Appendix to the *Treatise* a year later, he changed his mind and felt that theories about the mind would also have contradictions:

I had entertained some hopes, that however deficient our theory of the intellectual world might be, it wou'd be free from those contradictions, and absurdities, which seem to attend every explication, that human reason can give of the material world. But upon a more strict review of the section concerning I find myself involv'd in such a labyrinth, that, I must confess, I neither know how to correct my former opinions, nor how to render them consistent.

If this be not a good *general* reason for scepticism, 'tis at least a sufficient one (if I were not already abundantly supplied) for me to entertain a diffidence and modesty in all my decisions [*Treatise*, Appendix].

Thus, in the *Treatise*, the skeptical bottom line is that even our best theories about both physical and mental phenomena will be plagued with contradictions. In the concluding section of his *Enquiry*, Hume again addresses the topic of skepticism, but treats the matter somewhat differently: he rejects extreme skepticism but accepts skepticism in a more moderate form.

He associates extreme *Pyrrhonian skepticism* with blanket attacks on all reasoning about the external world, abstract reasoning about space and time, or causal reasoning about matters of fact. He argues, though, that we must reject such skepticism since “no durable good can ever result from it.” Instead, he recommends a more moderate or *Academic* skepticism that tones down Pyrrhonism by, first, exercising caution and modesty in our judgments, and, second, by restricting our speculations to abstract reasoning and matters of fact.

5. Theory of the Passions

Like many philosophers of his time, Hume developed a theory of the passions—that is, the emotions—categorizing them and explaining the psychological mechanisms by which they arise in the human mind. His most detailed account is in Book Two of the *Treatise*. Passions, according to Hume, fall under the category of impressions of reflection (as opposed to impressions of sensation). He opens his discussion with a taxonomy of types of passions, which are outlined here:

Reflective Impressions

1. Calm (reflective pleasures and pains)
2. Violent
 - a. Direct (desire, aversion, joy, grief, hope, fear)
 - b. Indirect (love, hate, pride, humility)

He initially divides passions between the calm and the violent. He concedes that this distinction is imprecise, but he explains that people commonly distinguish between types of passions in terms of their degrees of forcefulness. Adding more precision to this common distinction, he maintains that calm passions are emotional feelings of pleasure and pain associated with moral and aesthetic judgments. For example, when I see a person commit a horrible deed, I will experience a feeling of pain. When I view a good work of art, I will experience a feeling of pleasure. In contrast to the calm passions, violent ones constitute the bulk of our emotions, and these divide between direct and indirect passions. For Hume, the key direct passions are desire, aversion, joy, grief, hope, and fear.

They are called “direct” because they arise immediately—without complex reflection on our part—whenever we see something good or bad. For example, if I consider an unpleasant thing, such as being burglarized, then I will feel the passion of aversion. He suggests that sometimes these passions are sparked instinctively—for example, by my desire for food when I am hungry. Others, though, are not connected with instinct and are more the result of social conditioning. There is an interesting logic to the six direct passions, which Hume borrowed from a tradition that can be traced to ancient Greek Stoicism. We can diagram the relation between the six with this chart:

When good/bad objects are considered abstractly

Desire (towards good objects)

Aversion (towards evil objects)

When good/bad objects are actually present

Joy (towards good objects)

Grief (towards evil objects)

When good/bad objects are only anticipated

Hope (towards good objects)

Fear (towards evil objects)

Compare, for example, the passions that I will experience regarding winning the lottery vs. having my house burglarized. Suppose that I consider them purely in the abstract—or “consider’d simply” as Hume says (*Treatise*, 2.3.9.6). I will then desire to win the lottery and have an aversion towards being burglarized. Suppose that both situations are actually before me; I will then experience joy over winning the lottery and grief over being burglarized. Suppose, finally, that I know that at some unknown time in the future I will win the lottery and be burglarized. I will then experience hope regarding the lottery and fear of being burglarized.

Hume devotes most of Book 2 to an analysis of the indirect passions, his unique contribution to theories of the passions. The four principal passions are love, hate, pride, and humility. They are called “indirect” since they are the secondary effects of a previous feeling of pleasure and pain. Suppose, for example, that I paint a picture, which gives me a feeling of pleasure.

Since I am the artist, I will then experience an additional feeling of pride. He explains in detail the psychological process that triggers indirect passions such as pride. Specifically, he argues that these passions arise from a *double relation* between ideas and impressions, which we can illustrate here with the passion of pride:

1. I have an initial idea of some possession, or “subject”, such as my painting, and this idea gives me pleasure.
2. Through the associative principle of resemblance, I then immediately associate this feeling of pleasure with a resembling feeling of pride (this association constitutes the first relation in the double relation).
3. This feeling of pride then causes me to have an idea of myself, as the “object” of pride.
4. Through some associative principle such as causality, I then associate the idea of myself with the idea of my painting, which is the “subject” of my pride (this association constitutes the second relation in the double relation).

According to Hume, the three other principal indirect passions arise in parallel ways. For example, if my painting is ugly and causes me pain, then I will experience the secondary passion of *humility*—perhaps more accurately expressed as “humiliation”. By contrast, if someone else paints a pleasing picture, then this will trigger in me a feeling of *love* for that artist—perhaps more accurately expressed as “esteem”. If the artist

paints a painfully ugly picture, then this will trigger in me a feeling of “hatred” towards the artist—perhaps more accurately expressed as “disesteem”.

One of the most lasting contributions of Hume’s discussion of the passions is his argument that human actions must be prompted by passion, and never can be motivated by reason. Reason, he argues, is completely inert when it comes to motivating conduct, and without some emotion we would not engage in any action. Thus, he writes, “Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them” (*Treatise*, 2.3.3.4).

6. Religious Belief

Like many of Hume’s philosophical views, his position on religious belief is also skeptical. Critics of religion during the eighteenth-century needed to express themselves cautiously to avoid being fined, imprisoned, or worse. Sometimes this involved placing controversial views in the mouth of a character in a dialogue. Other times it involved adopting the persona of a deist or fideist as a means of concealing a more extreme religious skepticism.

Hume used all of the rhetorical devices at his disposal, and left it to his readers to decode his most controversial conclusions on religious subjects. During the Enlightenment, there were two pillars of traditional Christian belief: natural and revealed religion. *Natural religion* involves knowledge of God drawn from nature through the use of logic and reason, and typically involves logical proofs regarding the existence and nature of God, such as the causal and design arguments for God’s existence.

Revealed religion involves knowledge of God contained in revelation, particularly the Bible, the quintessential examples of which are biblical prophecies and miracles where God intervenes in earthly affairs to confirm the Bible’s message of salvation. Hume attacks both natural and revealed religious beliefs in his various writings.

a. Miracles

In a 1737 letter to Henry Home, Hume states that he intended to include a discussion of miracles in his *Treatise*, but ultimately left it out for fear of offending readers. His analysis of the subject eventually appeared some ten years later in his essay “Of Miracles” from the *Enquiry*, and is his first sustained attack on revealed religion. It is probably this main argument to which Hume refers.

The first of this two-part essay contains the argument for which Hume is most famous: uniform experience of natural law outweighs the testimony of any alleged miracle. Let us imagine a scale with two balancing pans. In the first pan we place the strongest evidence in support of the occurrence of a miracle. In the second we place our life-long experience of consistent laws of nature. According to Hume, the second pan will always outweigh the first. He writes:

It is experience only, which gives authority to human testimony [regarding miracles]; and it is the same experience, which assures us of the laws of nature. When, therefore, these two kinds of experience are contrary, we have nothing to do but subtract the one from the other, and embrace an opinion, either on one side or the other, with that assurance which arises from the remainder. But according to the principle here explained, this subtraction, with regard to all popular religions, amounts to an entire annihilation [*Enquiry*, 10.1].

Regardless of how strong the testimony is in favor of a given miracle, it can never come close to counterbalancing the overwhelming experience of unvaried laws of nature. Thus, proportioning one’s belief to the evidence, the wise person must reject the weaker evidence concerning the alleged miracle.

In the second part of "Of Miracles", Hume discusses four factors that count against the credibility of most miracle testimonies:

(1) witnesses of miracles typically lack integrity;

(2) we are naturally inclined to enjoy sensational stories, and this has us uncritically perpetuate miracle accounts;

(3) miracle testimonies occur most often in less civilized countries;

(4) miracles support rival religious systems and thus discredit each other. But even if a miracle testimony is not encumbered by these four factors, we should still not believe it since it would be contrary to our consistent experience of laws of nature. He concludes his essay with the following cryptic comment about Christian belief in biblical miracles:

upon the whole, we may conclude, that the *Christian Religion* not only was at first attended with miracles, but even at this day cannot be believed by any reasonable person without one. Mere reason is insufficient to convince us of its veracity: And whoever is moved by *Faith* to assent to it, is conscious of a continued miracle in his own person, which subverts all the principles of his understanding, and gives him a determination to believe what is most contrary to custom and experience [*Enquiry*, 10.2].

At face value, his comment suggests a fideist approach to religious belief such as what Pascal recommends. That is, reason is incapable of establishing religious belief, and God must perform a miracle in our lives to make us open to belief through faith. However, according to the eighteenth-century Hume critic John Briggs, Hume's real point is that belief in Christianity requires "miraculous stupidity" (*The Nature of Religious Zeal*, 1775).

b. Psychology of Religious Belief

Another attack on revealed religion appears in Hume's essay "The Natural History of Religion" (1757). It is one of the first systematic attempts to explain the causes of religious belief solely in terms of psychological and sociological factors. We might see the "Natural History" as an answer to a challenge, such as the sort that William Adams poses here in his attack on Hume's "Of Miracles":

Whence could the religion and laws of this people [i.e., the Jews] so far exceed those of the wisest Heathens, and come out at once, in their first infancy, thus perfect and entire; when all human systems are found to grow up by degrees, and to ripen, after many improvements; into perfection [*An Essay*, Part 2]?

According to Adams, only divine intervention can account for the sophistication of the ancient Jewish religion. In the "Natural History," though, Hume offers an alternative explanation, and one that is grounded solely in human nature, without God's direct involvement in human history.

The work may be divided into three parts. In the first (Sections 1 and 4), Hume argues that polytheism, and not monotheism, was the original religion of primitive humans. Monotheism, he believes, was only a later development that emerged with the progress of various societies. The standard theory in Judeo-Christian theology was that early humans first believed in a single God, but as religious corruption crept in, people lapsed into polytheism. Hume was the first writer to systematically defend the position of original polytheism. In the second part (Sections 2-3, 5-8), Hume establishes the psychological principles that give rise to popular religious belief.

His thesis is that natural instincts—such as fear and the propensity to adulate—are the true causes of popular religious belief, and not divine intervention or rational argument. The third part of this work (Sections 9-15) compares various aspects of polytheism with monotheism, showing that one is no more superior than the other. Both contain points of absurdity. From this he concludes that we should suspend belief on the entire subject of religious truth.

c. Arguments for God's Existence

Around the same time that Hume was composing his "Natural History of Religion" he was also working on his *Dialogues Concerning Natural Religion*, which appeared in print two decades later, after his death. As the title of the work implies, it is a critique of *natural* religion, in contrast with *revealed* religion. There are three principal characters in the *Dialogues*. A character named Cleanthes, who espouses religious empiricism, defends the design argument for God's existence, but rejects the causal argument.

Next, a character named Demea, who is a religious rationalist, defends the causal argument for God's existence, but rejects the design argument. Finally, a character named Philo, who is a religious skeptic, argues against both the design and causal arguments. The main assaults on theistic proofs are conveyed by both Cleanthes and Philo, and, to that extent, both of their critiques likely represent Hume's views.

The specific version of the causal argument that Hume examines is one by Samuel Clarke (and Leibniz before him). Simplistic versions of the causal argument maintain that when we trace back the causes of things in the universe, the chain of causes cannot go back in time to infinity past; there must be a first cause to the causal sequence, which is God. Clarke's version differs in that it is theoretically possible for causal sequences of events to trace back through time to infinity past.

Thus, we cannot argue that God's existence is required to initiate a sequence of temporal causes. Nevertheless, Clarke argued, an important fact still needs to be explained: the fact that this infinite temporal sequence of causal events exists at all. Why does something exist rather than nothing? God, then, is the necessary cause of the whole series.

In response, the character Cleanthes argues that the flaw in the cosmological argument consists in assuming that there is some larger fact about the universe that needs explaining beyond the particular items in the series itself. Once we have a sufficient explanation for each particular fact in the infinite sequence of events, it makes no sense to inquire about the origin of the *collection* of these facts.

That is, once we adequately account for each individual fact, this constitutes a sufficient explanation of the whole collection. He writes, "Did I show you the particular causes of each individual in a collection of twenty particles of matter, I should think it very unreasonable, should you afterwards ask me, what was the cause of the whole twenty" (*Dialogues*, 9).

The design argument for God's existence is that the appearance of design in the natural world is evidence for the existence of a divine designer. The specific version of the argument that Hume examines is one from analogy, as stated here by Cleanthes:

The curious adapting of means to ends, throughout all nature, resembles exactly, though it much exceeds, the productions of human contrivance; of human designs, thought, wisdom, and intelligence. Since, therefore, the effects resemble each other, we are led to infer, by all the rules of analogy, that the causes also resemble; and that the Author of Nature is somewhat similar to the mind of man (*Dialogues*, 2).

Philo presents several criticisms against the design argument, many of which are now standard in discussions of the issue. According to Philo, the design argument is based on a faulty analogy: we do not

know whether the order in nature was the result of design, since, unlike our experience with the creation of machines, we did not witness the formation of the world. In Philo's words, "will any man tell me with a serious countenance, that an orderly universe must arise from some thought and art like the human, because we have experience of it?"

To ascertain this reasoning, it were requisite that we had experience of the origin of worlds; and it is not sufficient, surely, that we have seen ships and cities arise from human art and contrivance" (ibid). Further, the vastness of the universe also weakens any comparison with human artifacts. Although the universe is orderly here, it may be chaotic elsewhere.

Similarly, if intelligent design is exhibited only in a small fraction of the universe, then we cannot say that it is the productive force of the *whole* universe. Philo states that "A very small part of this great system, during a very short time, is very imperfectly discovered to us; and do we thence pronounce decisively concerning the origin of the whole?" (ibid).

Philo also argues that natural design may be accounted for by nature alone, insofar as matter may contain within itself a principle of order, and "This at once solves all difficulties" (*Dialogues*, 6). And even if the design of the universe is of divine origin, we are not justified in concluding that this divine cause is a single, all powerful, or all good being. According to Philo, "Whether all these attributes are united in one subject, or dispersed among several independent beings, by what phenomena in nature can we pretend to decide the controversy?" (*Dialogues* 5).

7. Moral Theory

Hume's moral theory appears in Book 3 of the *Treatise* and in *An Enquiry Concerning the Principles of Morals* (1751). He opens his discussion in the *Treatise* by telling us what moral approval is *not*: it is not a rational judgment about either conceptual relations or empirical facts. To make his case he criticizes Samuel Clarke's rationalistic account of morality, which is that we rationally judge the fitness or unfitness of our actions in reference to eternal laws of righteousness, that are self-evidently known to all humans, just as is our knowledge of mathematical relations.

Hume presents several arguments against Clarke's view, one of which is an analogy from arboreal parricide: a young tree that overgrows and kills its parent exhibits the same alleged relations as a human child killing his parent. "Is not the one tree the cause of the other's existence; and the latter the cause of the destruction of the former, in the same manner as when a child murders his parent?" (*Treatise*, 3.1.1.24). If morality is a question of relations, then the young tree is immoral, which is absurd.

Hume also argues that moral assessments are not judgments about empirical facts. Take any immoral action, such as willful murder: "examine it in all lights, and see if you can find that matter of fact, or real existence, which you call *vice*" (*Treatise*, 3.1.1.25). You will not find any such fact, but only your own feelings of disapproval. In this context Hume makes his point that we cannot derive statements of obligation from statements of fact. When surveying various moral theories, Hume writes, "I am surpriz'd to find, that instead of the usual copulations of propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought* or an *ought not*" (*Treatise*, 3.1.1.26). This move from *is* to *ought* is illegitimate, he argues, and is why people erroneously believe that morality is grounded in rational judgments.

Thus far Hume has only told us what moral approval is not, namely a judgment of reason. So what then does moral approval consist of? It is an emotional response, not a rational one. The details of this part of his theory rest on a distinction between three psychologically distinct players: the moral agent, the receiver, and the moral spectator. The moral *agent* is the person who performs an action, such as stealing a car; the

receiver is the person impacted by the conduct, such as the owner of the stolen car; and the moral *spectator* is the person who observes and, in this case, disapproves of the agent's action.

This agent-receiver-spectator distinction is the product of earlier moral sense theories championed by the Earl of Shaftesbury (1671-1713), Joseph Butler (1692-1752), and Francis Hutcheson (1694-1747). Most generally, moral sense theories maintained that humans have a faculty of *moral* perception, similar to our faculties of *sensory* perception. Just as our external senses detect qualities in external objects, such as colors and shapes, so too does our moral faculty detect good and bad moral qualities in people and actions.

For Hume, all actions of a moral agent are motivated by character traits, specifically either virtuous or vicious character traits. For example, if you donate money to a charity, then your action is motivated by a virtuous character trait. Hume argues that some virtuous character traits are instinctive or natural, such as benevolence, and others are acquired or artificial, such as justice. As an agent, your action will have an effect on a receiver. For example, if you as the agent give food to a starving person, then the receiver will experience an immediately agreeable feeling from your act. Also, the receiver may see the usefulness of your food donation, insofar as eating food will improve his health. When considering the usefulness of your food donation, then, the receiver will receive another agreeable feeling from your act. Finally, I, as a spectator, observe these agreeable feelings that the receiver experiences.

I, then, will sympathetically experience agreeable feelings along with the receiver. These sympathetic feelings of pleasure *constitute* my moral approval of the original act of charity that you, the agent, perform. By sympathetically experiencing this pleasure, I thereby pronounce your motivating character trait to be a virtue, as opposed to a vice. Suppose, on the other hand, that you as an agent did something to hurt the receiver, such as steal his car. I as the spectator would then sympathetically experience the receiver's pain and thereby pronounce your motivating character trait to be a vice, as opposed to a virtue.

In short, that is Hume's overall theory. There are, though, some important details that should also be mentioned. First, it is tricky to determine whether an agent's motivating character trait is natural or artificial, and Hume decides this one virtue at a time. For Hume, the natural virtues include benevolence, meekness, charity, and generosity. By contrast, the artificial virtues include justice, keeping promises, allegiance and chastity. Contrary to what one might expect, Hume classifies the key virtues that are necessary for a well-ordered state as artificial, and he classifies only the more supererogatory virtues as natural.

Hume's critics were quick to point out this paradox. Second, to spark a feeling of moral approval, the spectator does not have to actually witness the effect of an agent's action upon a receiver. The spectator might simply hear about it, or the spectator might even simply invent an entire scenario and think about the possible effects of hypothetical actions. This happens when we have moral reactions when reading works of fiction: "a very play or romance may afford us instances of this pleasure, which virtue conveys to us; and pain, which arises from vices" (*Treatise*, 3.1.2.2).

Third, although the agent, receiver, and spectator have psychologically distinct roles, in some situations a single person may perform more than one of these roles. For example, if I as an agent donate to charity, as a spectator to my own action I can also sympathize with the effect of my donation on the receiver. Finally, given various combinations of spectators and receivers, Hume concludes that there are four irreducible categories of qualities that exhaustively constitute moral virtue:

- (1) qualities useful to others, which include benevolence, meekness, charity, justice, fidelity and veracity;
- (2) qualities useful to oneself, which include industry, perseverance, and patience;
- (3) qualities immediately agreeable to others, which include wit, eloquence and cleanliness;

(4) qualities immediately agreeable to oneself, which include good humor, self-esteem and pride. For Hume, most morally significant qualities and actions seem to fall into more than one of these categories. When Hume spoke about an agent's "useful" consequences, he often used the word "utility" as a synonym. This is particularly so in the *Enquiry Concerning the Principles of Morals* where the term "utility" appears over 50 times.

Moral theorists after Hume thus depicted his moral theory as the "theory of utility"—namely, that morality involves assessing the pleasing and painful consequences of actions on the receiver. It is this concept and terminology that inspired classic utilitarian philosophers, such as Jeremy Bentham (1748–1832).

8. Aesthetic, Political, and Economic Theory

Hume wrote two influential essays on the subject of aesthetic theory. In "Of Tragedy" (1757) he discusses the psychological reasons why we enjoy observing depictions of tragic events in theatrical production. He argues that "the energy of expression, the power of numbers, and the charm of imitation" convey the sense of pleasure. He particularly stresses the technical artistry involved when an artistic work imitates the original. In "*Of the Standard of Taste*" (1757) he argues that there is a uniform sense of artistic judgment in human nature, similar to our uniform sense of moral judgment.

Specific objects consistently trigger feelings of beauty within us, as our human nature dictates. Just as we can refine our external senses such as our palate, we can also refine our sense of artistic beauty and thus cultivate a delicacy of taste. In spite of this uniform standard of taste, two factors create some difference in our judgments: "the one is the different humours of particular men; the other, the particular manners and opinions of our age and country."

In political theory, Hume has both theoretical discussions on the origins of government and more informal essays on popular political controversies of his day. In his theoretical discussions, he attacks two basic notions in eighteenth-century political philosophy: the social contract and the instinctive nature of justice regarding private property.

In his 1748 essay "Of the Original Contract," he argues that political allegiance is not grounded in any social contract, but instead on our general observation that society cannot be maintained without a governmental system. He concedes that in savage times there may have been an unwritten contract among tribe members for the sake of peace and order. However, he argues, this was no permanent basis of government as social contract theorists pretend. There is nothing to transmit that original contract onwards from generation to generation, and our experience of actual political events shows that governmental authority is founded on conquest, not elections or consent.

We do not even tacitly consent to a contract since many of us have no real choice about remaining in our countries: "Can we seriously say that a poor peasant or artisan has a free choice to leave his country, when he knows no foreign language or manners, and lives from day to day by the small wages which he acquires?" Political allegiance, he concludes, is ultimately based on a primary instinct of selfishness, and only through reflection will we see how we benefit from an orderly society.

Concerning private property, in both the *Treatise* and the *Enquiry Concerning the Principles of Morals* (1751), Hume in essence argues against Locke's notion of the natural right to private property. For Hume, we have no primary instinct to recognize private property, and all conceptions of justice regarding property are founded solely on how useful the convention of property is to us. We can see how property ownership is tied to usefulness when considering scenarios concerning the availability of necessities.

When necessities are in overabundance, I can take what I want any time, and there is no usefulness in my claiming any property as my own. When the opposite happens and necessities are scarce, I do not acknowledge anyone's claim to property and take what I want from others for my own survival. Thus, "the rules of equity or justice [regarding property] depend entirely on the particular state and condition in which men are placed, and owe their origin and existence to that utility, which results to the public from their strict and regular observance" (*Enquiry Concerning the Principles of Morals*, 3). Further, if we closely inspect human nature, we will never find a primary instinct that inclines us to acknowledge private property. It is nothing like the primary instinct of nest building in birds. While the sense of justice regarding private property is a firmly fixed habit, it is nevertheless its usefulness to society that gives it value.

As for Hume's informal essays on popular political controversies, several of these involve party disputes between the politically conservative Tory party that supported a strong monarchy, and the politically liberal Whig party which supported a constitutional government. Two consistent themes emerge in these essays. First, in securing peace, a monarchy with strong authority is probably better than a pure republic. Hume sides with the Tories because of their traditional support of the monarchy.

Except in extreme cases, he opposes the Lockean argument offered by Whigs that justifies overthrowing political authorities when those authorities fail to protect the rights of the people. Hume notes, though, that monarchies and republics each have their strong points. Monarchies encourage the arts, and republics encourage science and trade. Hume also appreciates the mixed form of government within Great Britain, which fosters liberty of the press. The second theme in Hume's political essays is that revolutions and civil wars principally arise from zealotry within party factions. Political moderation, he argues, is the best antidote to potentially ruinous party conflict.

In economic theory, Hume wrote influential essays on money, interest, trade, credit, and taxes. Many of these target the mercantile system and its view that a country increases its wealth by increasing the quantity of gold and silver in that country. For mercantilists, three means were commonly employed to this end:

- (1) capture gold, silver and raw material from other countries through colonization;
- (2) discourage imports through tariffs and monopolies, which keeps acquired gold and silver within one's country's borders; and,
- (3) increase exports, which brings in money from outside countries. In Great Britain, mercantile policies were instituted through the Navigation Acts, which prohibited trade between British colonies and foreign countries. These protectionist laws ultimately led to the American Revolution.

The most famous of Hume's anti-mercantilist arguments is now called *Hume's gold-flow theory*, and appears in his essays "Of Money" (1752) and "Of the Balance of Trade" (1752). Contrary to mercantilists who advocated locking up money in one's home country, Hume argued that increased money in one country automatically disperses to other countries. Suppose, for example, that Great Britain receives an influx of new money.

This new money will drive up prices of labor and domestic products in Great Britain. Products in foreign countries, then, will be cheaper than in Great Britain; Britain, then, will import these products, thereby sending new money to foreign countries. Hume compares this reshuffling of wealth to the level of fluids in interconnected chambers: if I add fluid to one chamber, then, under the weight of gravity, this will disperse to the others until the level is the same in all chambers. A similar phenomenon will occur if we lose money in our home country by purchasing imports from foreign countries. As the quantity of money decreases in our home country, this will drive down the prices of labor and domestic products.

Our products, then, will be cheaper than foreign products, and we will gain money through exports. On the fluid analogy, by removing fluid from one chamber, more fluid is drawn in from surrounding chambers.

9. History and Philosophy

Although Hume is now remembered mainly as a philosopher, in his own day he had at least as much impact as a historian. His *History of England* appeared in four installments between 1754 and 1762 and covers the periods of British history from most ancient times through the seventeenth-century. To his 18th and 19th century readers, he was not just another historian, but a uniquely *philosophical* historian who had an ability to look into the minds of historical figures and uncover the motives behind their conduct. A political theme underlying the whole *History* is, once again, a conflict between Tory and Whig ideology.

In the Britain of Hume's day, a major point of contention between the two parties was whether the English government was historically an absolute or limited monarchy. Tories believed that it was traditionally absolute, with governmental authority being grounded in royal prerogative. Whigs, on the other hand, believed that it was traditionally limited, with the foundation of government resting in the individual liberty of the people, as expressed in the parliamentary voice of the commons. As a historian, Hume felt that he was politically moderate, tending to see both the strengths and weaknesses in opposing viewpoints:

With regard to politics and the character of princes and great men, I think I am very moderate. My views of things are more conformable to Whig principles; my representations of persons to Tory prejudices. Nothing can so much prove that men commonly regard more persons than things, as to find that I am commonly numbered among the Tories [Hume to John Clephane, 1756].

However, to radical Whig British readers, Hume was a conservative Tory who defended royal prerogative.

Hume takes two distinct positions on the prerogative issue. From a theoretical and idealistic perspective, he favored a mixed constitution, mediating between the authority of the monarch and that of the Parliament. Discussing this issue in his 1741 *Essays*, he holds that we should learn "the lesson of moderation in all our political controversies." However, from the perspective of how British history actually unfolded, he emphasized royal prerogative. And, as a "philosophical historian," he tried to show how human nature gave rise to the tendency towards royal prerogative.

In his brief autobiography, "My Own Life," he says that he rejected the "senseless clamour" of Whig ideology, and believed "It is ridiculous to consider the English constitution before that period [of the Stuart Monarchs] as a regular plan of liberty." Gilbert Stuart best encapsulated Hume's historical stance on the prerogative issue: "his history, from its beginning to its conclusion, is chiefly to be regarded as a plausible defence of prerogative" (*A View of Society in Europe*, 1778, 2.1.1). In short, Hume's Tory narrative is this. As early as the Anglo Saxon period, the commons did not participate in the king's advisory council.

The Witenagemot, for example, was only a council of nobles and bishops, which the king could listen to or ignore as he saw fit. Throughout the succeeding centuries, England's great kings were those who exercised absolute rule, and took advantage of prerogative courts such as the Star Chamber. Elizabeth—England's most beloved monarch—was in fact a tyrant, and her reign was much like that of a Turkish sultan. Charles I—a largely virtuous man—tried to follow in her footsteps as a strong monarch. After a few minor lapses in judgment, and a few too many concessions to Catholics, Protestant zealots rose up against him, and he was ultimately executed. To avoid over-characterizing royal prerogative, Hume occasionally condemns arbitrary actions of monarchs and praises efforts for preserving liberty. Nevertheless, Whig critics like Gilbert Stuart argued that Hume's emphasis was decisively in favor of prerogative.

There is an irony to Hume's preference for prerogative over civil liberty. His philosophical writings were among the most controversial pieces of literature of the time, and would have been impossible to publish if Britain was not a friend to liberty. Although Hume was certainly no enemy to liberty, he believed that it was best achieved through moderation rather than Whig radicalism. He writes, "If any other rule than established practice be followed, factions and dissensions must multiply without end" (*History*, Appendix 3).

To Hume's way of thinking, the loudest voices favoring liberty were Calvinistic religious fanatics who accomplished little more than dissension. A strong, centralized and moderating force was the best way to avoid factious disruption from the start.

ADAM SMITH:

Adam Smith (5 June 1723 – 17 July 1790) was a Scottish moral philosopher and a pioneer of political economy. One of the key figures of the Scottish Enlightenment, Smith is best known for two classic works: *The Theory of Moral Sentiments* (1759), and *An Inquiry into the Nature and Causes of the Wealth of Nations*, generally referred to by its shortened title *The Wealth of Nations*, is the magnum opus of the Scottish economist and moral philosopher Adam Smith.

First published in 1776, the book offers one of the world's first collected descriptions of what builds nations' wealth and is today a fundamental work in classical economics. Through reflection over the economics at the beginning of the Industrial Revolution the book touches upon such broad topics as the division of labour, productivity and free markets. Smith laid the foundations of classical free market economic theory.

The Wealth of Nations was a precursor to the modern academic discipline of economics. In this and other works, he expounded upon how rational self-interest and competition can lead to economic prosperity. *The Wealth of Nations* was named among the 100 Best Scottish Books of all time.

His believes;

- **Laissez-faire**, (French: "allow to do"), policy of minimum governmental interference in the economic affairs of individuals and society. The origin of the term is uncertain. Laissez-faire was a political as well as an economic doctrine.
The pervading theory of the 19th century was that the individual, pursuing his own desired ends, would thereby achieve the best results for the society of which he was a part. The function of the state was to maintain order and security and to avoid interference with the initiative of the individual in pursuit of his own desired goals.
But laissez-faire advocates nonetheless argued that government had an essential role in enforcing contracts as well as ensuring civil order. The philosophy's popularity reached its peak around 1870. In the late 19th century the acute changes caused by industrial growth and the adoption of mass-production techniques proved the laissez-faire doctrine insufficient as a guiding philosophy. Although the original concept yielded to new theories that attracted wider support, the general philosophy still has its advocates.
- **Invisible hand of the market** is a metaphor used by Adam Smith to describe the self-regulating behavior of the marketplace. Individuals can make profit, and maximize it without the need for government intervention.

The exact phrase is used just three times in Smith's writings, but has come to capture his important claim that individuals' efforts to maximize their own gains in a free market may benefit society, even if the ambitious have no benevolent intentions.

Smith came up with the two meanings of the phrase from Richard Cantillon who developed both economic applications in his model of the isolated estate. Smith assumed that individuals try to maximize their own good (and become wealthier), and by doing so, through trade and entrepreneurship, society as a whole is better off.

Furthermore, any government intervention in the economy isn't needed because the invisible hand is the best guide for the economy. As a result, he is responsible for popularizing many of the ideas that underpin the school of thought that became known as classical economics.

Other economists built on Smith's work to solidify classical economic theory, which would become the dominant school of economic thought through the Great Depression.

- Market Mechanisms; this is basically an analysis of price formation and resource allocation. His assumptions claims that in the competitive market in the long run, prices and cost of production are identical. He said that short time prices are market prices. High prices will bring in more resources into that sector.

He also offered the idea of optimum allocation of resources. Smith also offered the other of demand and supply, though he objected to government interferences/intervention.

Adam Smith favoured;

- a) Protection of infant industries
- b) Regulation of economy for National Defence
- c) Welfare and Justice.

- Capital and Capitalist; wealth depend on capital accumulation, capital accumulation allows division of labour and division of employment and economic development.
- Adam Smith also stressed on productive and unproductive labour:
The two things Smith was concerned with are;
 - a. Level of production and
 - b. How much of the labour that is engaged in production.

- **Smith Theory of Value;**

Adam Smith assumed that price and value were identical. The problems he was concerned with are:

- a. The measurement of Value
- b. What determines value
- c. What determines price level

To Adam Smith the wealth of a nation depended on **exchange**, we exchange goods based on price or value so if you cannot have a theory of price and value then you cannot say anything about exchange.

His two definitions of value are (a) Use value and (b) Exchange value

Exchange value implies that price is exchanged value as expressed in the market.

While:

Used value is a social thing having social or ethical value.

In his discussion of relative prices he identified three areas to consider namely

- I. Cost of production theory
- II. Labour cost theory and
- III. Labour demand theory of relative prices.

Also among his theories is welfare theory.

Thomas Robert Malthus:

The Reverend **Thomas Robert Malthus** FRS (1766 –1834) was an English cleric and scholar, influential in the fields of political economy, demography and macroeconomics. Malthus himself used only his middle name, Robert. He was born February 13, 1766 at Westcott, United Kingdom and died December 29, 1834 at Bath, United Kingdom. Robert was greatly influenced by Adam Smith, David Ricardo, and other scholars. Malthus is widely regarded as the founder of modern demography. In essence, Malthus was an economic pessimist.

His Essay on the Principle of Population observed that sooner or later population will be checked by famine and disease, leading to what is known as a Malthusian catastrophe

Malthusian Theory of Population

Thomas Robert Malthus was the first economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population* (1798), for which he collected empirical data to support his thesis. Malthus had the second edition of his book published in 1803, in which he modified some of his views from the first edition, but essentially his original thesis did not change.

In *Essay on the Principle of Population*, Malthus proposes the principle that human populations grow exponentially (i.e., doubling with each cycle) while food production grows at an arithmetic rate (i.e. by the repeated addition of a uniform increment in each uniform interval of time). Thus, while food output was likely to increase in a series of twenty-five year intervals in the arithmetic progression 1, 2, 3, 4, 5, 6, 7, 8, 9, and so on, population was capable of increasing in the geometric progression 1, 2, 4, 8, 16, 32, 64, 128, 256, and so forth. This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on. He argued that population multiplies geometrically and food arithmetically; therefore, the population will eventually outstrip the food supply.

To avoid such a catastrophe, Malthus urged controls on population growth.

On the basis of a hypothetical world population of one billion in the early nineteenth century and an adequate means of subsistence at that time, Malthus suggested that there was a potential for a population increase to 256 billion within 200 years but that the means of subsistence were only capable of being increased enough for nine billion to be fed at the level prevailing at the beginning of the period. He therefore considered that the population increase should be kept down to the level at which it could be supported by the operation of various checks on population growth, which he categorized as "preventive" and "positive" checks.

The chief preventive check envisaged by Malthus was that of "moral restraint", which was seen as a deliberate decision by men to refrain "from pursuing the dictate of nature in an early attachment to one woman", i.e. to marry later in life than had been usual and only at a stage when fully capable of supporting a family.

This, it was anticipated, would give rise to smaller families and probably to fewer families, but Malthus was strongly opposed to birth control within marriage and did not suggest that parents should try to restrict the number of children born to them after their marriage. Malthus was clearly aware that problems might arise from the postponement of marriage to a later date, such as an increase in the number of illegitimate births, but considered that these problems were likely to be less serious than those caused by a continuation of rapid population increase.

He saw positive checks to population growth as being any causes that contributed to the shortening of human lifespans. He included in this category poor living and working conditions which might give rise to low resistance to disease, as well as more obvious factors such as disease itself, war, and famine. Some of the conclusions that can be drawn from Malthus's ideas thus have obvious political connotations and this partly accounts for the interest in his writings and possibly also the misrepresentation of some of his ideas by authors such as Cobbett, the famous early English radical.

Some later writers modified his ideas, suggesting, for example, strong government action to ensure later marriages. Others did not accept the view that birth control should be forbidden after marriage, and one group in particular, called the Malthusian League, strongly argued the case for birth control, though this was contrary to the principles of conduct which Malthus himself advocated.

Between 1798 and 1826 he published six editions of *An Essay on the Principle of Population*, updating each edition to incorporate new material, to address criticism, and to convey changes in his own perspectives on the subject

Malthus was a political economist who was concerned about, what he saw as, the decline of living conditions in nineteenth century England. He blamed this decline on three elements: The overproduction of young; the inability of resources to keep up with the rising human population; and the irresponsibility of the lower classes.

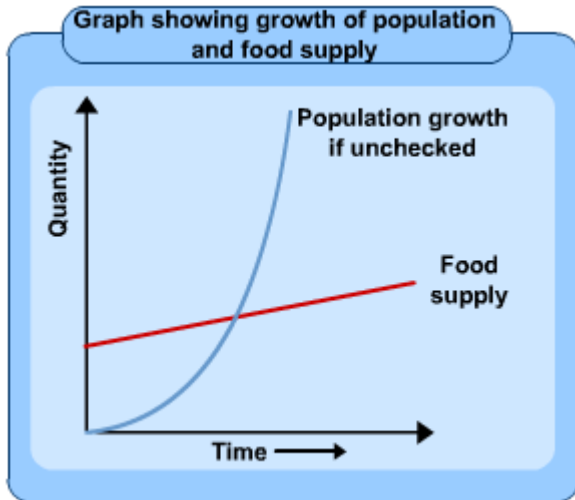
To combat this, Malthus suggested the family size of the lower class ought to be regulated such that poor families do not produce more children than they can support. Does this sound familiar? China has implemented a policy of one child per family (though this applies to *all families*, not just those of the lower class).

Robert Malthus Population Model:

It is possible you will be asked about the consequences of **Population growth**. Firstly, it is important that you appreciate two contrasting viewpoints.

The first is from Malthus, who was writing at the end of the 18th century. He believed that only bad could come from population growth. Population he said grows faster than food supply. This he said was because food supply can only grow arithmetically, for example, 1 then 2 then 3-4-5-6-7-8 but, population grows geometrically 2-4-8-16-32-64.

Consequently, there is no way food supply can keep up with population growth.



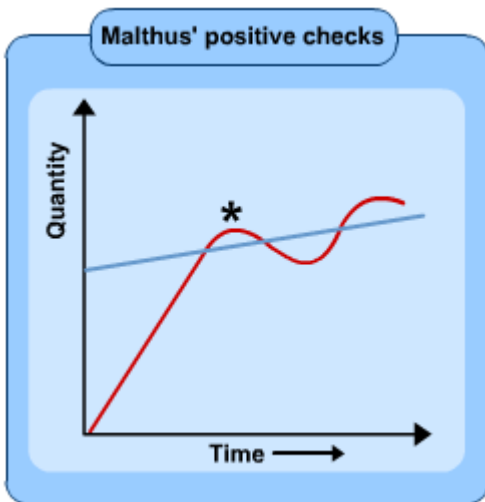
Population grows exponentially, for example, 1-2-4-8-16-32-64.

Food supply grows arithmetically, for example, 1-2-3-4-5-6.

Therefore, population will inevitably exceed food supply.

He then went on to say that there are two possible outcomes.

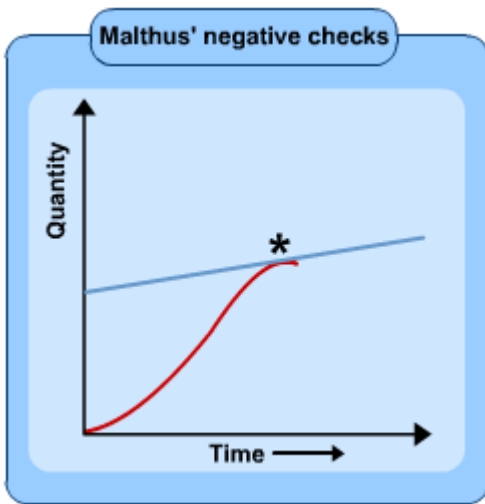
Firstly, he said population could exceed food supply only to be positively "checked" (reduced) by famine, war, and disease.



*** Population exceeds food supply and is kept in check by war, famine, or disease. It then drops below the food supply. As the population recovers, so the cycle continues.**

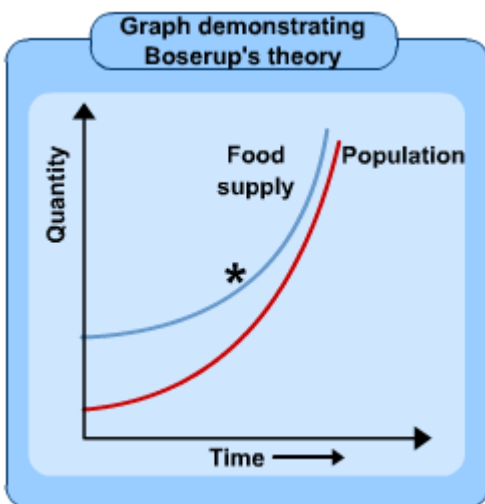
Alternatively, the population could pre-empt the food shortages and so slow their population growth keeping it within the limits of the food supply. Malthus called these negative checks. These negative checks would

include later marriages and abstinence from sex (Remember Malthus was writing before wide spread contraception!). People would make these decisions sub-consciously as food prices increased and standard of living fell.



*** Here, as population starts to approach the limits of the food supply, so growth slows. Malthus says this slowing is caused by delayed marriage.**

Boserup, on the other hand, said that food supply would increase to accommodate population growth. As a population found that they were approaching food shortages they would identify ways of increasing supply whether through new technology, better seeds, new farming methods. **In the graph you can see that food supply will increase with population:**



*** Boserup argues that as the population approaches the limits of the food supply, that food supply increases as new technology improves yields.**

So who is correct? The following table lists arguments for both sides:

Evidence for Malthus:

Famines are frequently happening in less developed world countries. These are also often in countries that have a fast growing population.

Whilst a very old theory Malthus can be adapted for today if we say that increasing population cannot be sustained by the environment. The 'Club of Rome' applies Malthusian ideas to the modern world and says that if population continues to grow our attempts to cater for it will lead to great environmental disasters. This would include global warming, oil spillage, ozone depletion, and desertification.

Malthusian supporters argue that everything at the moment may appear ok but this doesn't mean we won't face future disasters.

A lot of people believe that future conflicts could be fought over water supplies. Is Malthus' idea correct except that he should have replaced food with water?

Evidence for Boserup:

There is enough food to feed the world - this is an indisputable fact. The problem lies with distribution - it is not always where it is needed.

Famine is more likely to be the result of a natural disaster, war or the country growing too many cash crops. Cash crops are grown to sell overseas - such as cotton or tea. In times of famine the countries are often producing large cash crop harvests. They need the money to try and pay off foreign debts.

New farming machinery and re-organisation has greatly increased the efficiency of farms and consequently the yields.

The green revolution produced seeds that could increase yields by up to eight times.

Criticism of Thomas Robert Malthus Population Model:

Many theoretical and political critiques of Malthus and Malthusian thinking emerged soon after the publication of the first *Essay on Population*, most notably in the work of the reformist industrialist Robert Owen, the essayist William Hazlitt, and economists John Stuart Mill and Nassau William Senior, and moralist William Cobbett.

The highpoint of opposition to Malthus' ideas came in the middle of the nineteenth century with the writings of Karl Marx (*Capital*, 1867) and Friedrich Engels (*Outlines of a Critique of Political Economy*, 1844), who argued that what Malthus saw as the problem of the pressure of population on the means of production was actually that of the pressure of the means of production on population. In other words, the seeming excess of population that Malthus attributed to the seemingly innate disposition of the poor to reproduce beyond their means was actually a product of the very dynamic of capitalist economy—its "reserve army of the unemployed."

Evolutionists John Maynard Smith and Ronald Fisher were both critical of Malthus' hypothesis, though it was Fisher who referred to the growth rate r (used in equations such as the logistic function) as the Malthusian parameter. Fisher referred to "a relic of creationist philosophy" in observing the fecundity of nature and deducing (as Charles Darwin did) that this therefore drove natural selection. Smith doubted that famine was the great leveler that Malthus insisted it was.

Many twentieth century economists, such as Julian Lincoln Simon, also criticized Malthus' conclusions. They note that despite the predictions of Malthus and the Neo-Malthusians, massive geometric population growth in the twentieth century has not resulted in a Malthusian catastrophe, largely due to the influence of

technological advances and the expansion of the market economy, division of labor, and stock of capital goods.

Malthus argued that as wages increase within a country, the birthrate increases while the death rate decreases. His reasoning was that high incomes allowed people to have sufficient means to raise their children, such as feeding and clothing them, thus resulting in greater desire to have more children, which increases the population. In addition, high incomes also allowed people to be able to afford proper medication to fight off potentially harmful diseases, thus decreasing the death rate.

As a result, wage increases caused population to grow as the birthrate increases and the death rate decreases. He further argued that as the supply of labor increases with the increased population growth at a constant labor demand, the wages earned would decrease eventually to subsistence where the birthrate is equal to the death rate, resulting in no population growth.

However, the world generally has experienced quite a different result than the one Malthus predicted. During the late nineteenth and early twentieth centuries, the population increased as did the wages, with the spread of the industrial revolution. Malthus assumed a constant labor demand in his assessment of England and in doing so, he ignored the effects of industrialization.

As the world became more industrialized, the level of technology and production grew, causing an increase in labor demand. Thus, even though labor supply increased so did the demand for labor. In fact, the labor demand arguably increased *more* than the supply, as measured by the historically observed increase in real wages globally with population growth. Equally, technological advances in agriculture dramatically increased food production, allowing it to meet and even exceed population growth. The incidence of famine has consequently decreased, with famines in the modern era generally caused by war or government policies rather than actual lack of food.

JEAN-BAPTISTE SAY:

Jean-Baptiste Say (1767–1832) was a French economist and businessman. He had classically liberal views and argued in favor of competition, free trade, and lifting restraints on business. He is best known due to Say's Law, which is named after him and at times credited to him, but while he discussed and popularized it, he did not originate it. He was born January 5, 1767 in Lyon, France to the family of Françoise Brun de Castanet Say and Jean-Etienne Say. He died November 15, 1832 at Paris, France. He had two children, Horace Say and Octavie Say. He was influenced by Richard Cantillon, Adam Smith and other scholars.

Say's Law:

He is well known for Say's Law (or Say's Law of Markets), often summarised as

- "Aggregate supply creates its own aggregate demand",
- "Supply creates its own demand",
- "Supply constitutes its own demand",

Say's law says "the supply (sale) of X creates the demand (purchase) of Y." This law can be shown by business-cycle statistics. When downturns start, production is always first to decline, ahead of demand. When the economy recovers, production recovers ahead of demand.

From Say's Law it can be understood that if inventory doesn't sell, then prices will be cut until it does. Or, if a manufacturer wants to sell to a mass market, he knows that he cannot wait until everyone can afford something expensive; he knows that he has to market his product at a low enough price that it will begin to sell. When industrial production increases and more goods become available, some old goods will go unsold as money moves over to the new goods, and prices will have to fall right across the board.

That is called "deflation," and it is what happened in the United States from the end of the Civil War until 1896, while the United States grew to have the largest economy in the world. Money became more valuable, and wages continued to buy as much as was desired of total production. Hence, the reason why there has been no deflation since World War II, even though the U.S. economy has grown vastly since then, was that deflation will only happen if the money supply does not grow fast enough as production increases. Prices will remain stable or even increase (inflation) if the money supply grows as fast or faster than production.

If the money supply does not increase, the "wage and price spiral" runs out of money. If a business raises prices to offset wage increases, less of its production will be sold. If enough is sold that revenue actually increases, as desired, this will have two effects:

(1) people are getting less for their money from this business, which decreases the value going to consumers.

(2) money is drawn from elsewhere in the economy, which means that there is less money left to buy the production of other businesses. Somebody gets the short end of the stick. Somebody has to cut prices. Then there is this "real wages" vs. "nominal wages" paradox.

The reason why real wages would rise as nominal wages fell may be sketched by a simple consideration. Expanded production will always mean expanded demand for labor. Drawing off labor to produce new goods bids up the value of labor, which would offset the downward tendency of deflation. This all lead to the following conclusion:

Wages that are not allowed to naturally seek a market clearing level will produce the same results as any other kind of price fixing scheme: when wages (prices) are too low, a shortage results; and when wages (prices) are too high, a surplus results. A surplus in the labor market is called "unemployment." Hoover and Roosevelt thus engineered, not greater demand and prosperity, but greater unemployment and unchecked depression (Sowell 1972).

Another way to understand the concept of "real wages" is to note that what wages will buy depends on the value of money, while the value of money depends on the transactions the money supply must cover, in other words the output of the economy. Thus, what wages will buy depends on what the economy produces, and Say's Law means that the value of money will rise to a market clearing level, that is, until production may be purchased by the money held by consumers.

The magic question here, with cutting prices in the deflation of a growing economy but inability to cut wages to the same degree, is this what is going to restore the profit margin?

The answer according to Say is "greater productivity." If the workers with higher real wages produce proportionally more for those wages, then the balance of revenue and expenses will be restored (Say 1803).

Therefore, once Say's Law is understood, it is obvious that growth in production takes care of demand, as long as wages are allowed to maintain market-clearing levels. What happens to the money supply is secondary, though it helps to avoid falling wages, since people are not going to like that, whether it really makes any difference or not (and it will increase the value of debt). Price deflation is acceptable as long as wages do not also fall, but that is a tough target to hit. Growth in productivity, not just growth in production, is ultimately what makes life better and increases wealth for everyone.

Jean-Baptiste Say supported the *laissez-faire* position of Adam Smith, stating that overproduction in one market will naturally return to balance without government interference as the producer will either adjust production to different items or adjust prices until the goods sell. Say did not, however, agree with Smith's labor theory of value that the value of a commodity depends on the labor involved in its production, arguing instead that value derives from its ability to satisfy the desires or needs of the consumer.

Say's work in macro-economics:

In 1803, Say published his most famous work, *Treatise on Political Economy*. His distinctive approach to economics was the outcome of a muddled marriage of Condillac's utility theory of demand and Adam Smith's cost theory of supply.

Value, Say claimed, was the outcome of the interaction of these two. In this respect, he departs considerably from the Classical Ricardian School, where value is determined purely from the cost side. Say's approach was taken up by French Liberal School and he can be considered a precursor of the Marginalist Revolution. Like Richard Cantillon before him and the Austrian School after him, Say also placed great emphasis on the risk-taking entrepreneur and even tried to include him as the "fourth" factor of production in his analysis.

Say brought the entrepreneur to life and to the center of the stage. But what do these entrepreneurs do? They use their "industry" (a term Say preferred to "labor") to organize and direct the factors of production so as to achieve the "satisfaction of human wants." But they are not merely managers. They are forecasters, project appraisers, and risk-takers as well. Out of their own financial capital, or that borrowed from someone else, they advance funds to the owners of labor, natural resources ("land"), and machinery ("tools") (Say 1803).

For Say, the foundation of value is utility, or the capacity of a good or service to satisfy some human desire. Those desires and the preferences, expectations, and customs that lie behind them must be taken as givens, as data, by the analyst. The task is to reason from those data. Say is most emphatic in denying the claims of Adam Smith, David Ricardo, and others that the basis for value is labor, or "productive agency" (Say 1803). In this, he anticipated the Austrian School's subjective theory of value.

Nowhere is Say's radicalism more evident than in his critique of government intervention into the economy. Most succinctly stated, he declared that self-interest and the search for profits will push entrepreneurs toward satisfying consumer demand:

DAVID RICARDO (1772 –1823):

He was a British political economist. He was one of the most influential of the classical economists, along with Thomas Malthus, Adam Smith, and James Mill. He was born April 18, 1772, in London, United Kingdom. He died September 11, 1823, at Gloucestershire, United Kingdom.

David Ricardo was the third of 17 children in a Sephardic Jewish family (from Portugal) that emigrated from the Netherlands to England just prior to his birth. At age 14, Ricardo joined his father at the London Stock Exchange, where he began to learn about the workings of finance. This beginning set the stage for Ricardo's later success in the stock market and real estate.

Ricardo rejected the orthodox Jewish beliefs of his family and eloped with a Quakeress, Priscilla Anne Wilkinson, when he was 21. He later became a Unitarian, and was disinherited by his family. It is likely that his mother never spoke to him again.

He was married to Priscilla Anne Wilkinson in 1793. He began his professional life as a broker and financial market speculator. He was influenced by Adam Smith, Jeremy Bentham and James Mill.

The scope of Economics to Ricardo;

He was concerned with the functional distribution of income. He wanted to know the laws which regulate the distribution of income among capitalists, landlords and labour. He emphasized on the theory of Distributions of income. He also deliberated on theory of rent, wages and profit.

Law of Rent:

Ricardo formulate the "law of rent" around 1809. It was the first clear exposition of the source and magnitude of land rents, and is among the most important and firmly established principles of economics. The Law of Rent states that the rent of a land site is equal to the economic advantage obtained by using the site in its most productive use, relative to the advantage obtained by using marginal (the best rent-free) land for the same purpose, given the same inputs of labor and capital.

To see how competition generates rent and, therefore, determines the magnitudes of the two remaining shares, we follow Ricardo's original logic. He began by noting that if land is not scarce, then it generates no rent.

But, of course, land is scarce and of differing qualities. As population increases, it becomes necessary to cultivate less quality land. Given competition among farmers, and assuming, for example, that there is a difference of ten units of corn in profits between the highest quality land and a low quality land, the farmer on the lower quality land would bid up to ten units in order to farm on the highest quality land. As Ricardo tells the story, the landowner of the higher quality land would insist on a ten unit rent

With this simple model, Ricardo could explain how the two remaining shares, rent and profits, were determined. The logic is crystal clear:

1. A given population requires a certain amount of food.
2. The lowest quality land called into cultivation generates some profit (total revenue—wages).
3. This profit becomes the prevailing profit through competition among farmers—any difference between the profit generated by higher quality land and the profit generated by the lowest quality land accrues to the landowner as rent.

This law has a number of important implications, perhaps the most important being its implication for wages. The law of rent implies that wages bear no systematic relationship to the productivity of labor, and are instead determined solely by its productivity "on marginal land," as all production in excess of that amount will be appropriated by landowners in rent.

The law of rent makes it clear that the landowner has no role in setting land rents: he simply appropriates the additional production his more advantageous site makes possible, compared to marginal sites. The law also implies that the landowner cannot pass on the burden of any cost such as land taxes to his tenants, as long as such costs do not affect the relative productivity of his land and marginal land.

Ricardian Models:

Comparative Advantage

"Comparative advantage" Ricardo argued in favour of industry specialisation and free trade. He attempted to prove, using simple mathematics, that industry specialization combined with free international trade always produces positive results. This theory expanded on the concept of absolute advantage.

Ricardo argued that there is mutual national benefit from trade even if one country is more competitive in every area than its trading counterpart and that a nation should concentrate resources only on industries where it had a comparative advantage that is in those industries in which it has the greatest competitive edge.

Theory of Comparative Advantage

In his 1815 work, *Essay on the Influence of a Low Price of Corn on the Profits of Stock*, Ricardo articulated what came to be known as the "law of diminishing returns." One of the most famous laws of economics, it holds that as more and more resources are combined in production with a fixed resource—for example, as more labor and machinery are used on a fixed amount of land—the additions to output will diminish.

Ricardo also opposed the protectionist Corn Laws, which restricted imports of wheat. In arguing for free trade, Ricardo formulated the idea of comparative costs, today called "comparative advantage." Comparative advantage, a very subtle idea, is the main basis for most economists' belief in free trade today. The idea is this: A country that trades for products that it can get at lower cost from another country is better off than if it had made the products at home.

Ricardo illustrated this by means of a comparison of the productivity of two imaginary countries, "Richland" and "Poorland." The gains in foreign trade for both of his imaginary countries come, Ricardo observed, because each country specializes in producing the goods for which its comparative cost is lower (Ricardo 1815). In his example, both countries produce wine and bread, but "Richland's" workers are more productive, requiring fewer hours of labor to produce each item:

Analyzing this in more detail, the following table considers England and Portugal as producers of wheat and wine.

Table 1.

COUNTRY	WHEAT	WINE
	Cost per Unit in Man Hours	Cost per Unit in Man Hours
England	15	30
Portugal	10	15

It can be seen that Portugal can produce both wheat and wine more cheaply than England (it has an absolute advantage in both commodities). What David Ricardo saw was that it could still be mutually beneficial for both countries to specialize and trade. In Table 1, a unit of wine in England costs the same amount to produce as two units of wheat. Production of an extra unit of wine means foregoing production of two units of wheat—thus, the "opportunity cost" of a unit of wine is two units of wheat. In Portugal, a unit of wine costs one and a half units of wheat to produce—thus, the "opportunity cost" of a unit of wine is 1.5 units of wheat in Portugal. Because relative or comparative costs differ, it will still be mutually advantageous for both countries to trade, even though Portugal has an absolute advantage in both commodities. Portugal is relatively better at producing wine than wheat: so Portugal is said to have a comparative advantage in the production of wine. England is relatively better at producing wheat than wine: so England is said to have a comparative advantage in the production of wheat.

When both countries specialize and trade their products, both countries gain. These gains come, Ricardo observed, because each country specializes in producing the goods for which its comparative cost is lower.

Writing a century before Paul Samuelson and other modern economists popularized the use of equations, Ricardo is still esteemed for his uncanny ability to arrive at complex conclusions without any of the mathematical tools now deemed essential. As economist David Friedman (1992) put it in his textbook, *Price Theory*, "The modern economist reading Ricardo's *Principles* feels rather as a member of one of the Mount Everest expeditions would feel if, arriving at the top of the mountain, he encountered a hiker clad in T-shirt and tennis shoes."

Principles of Political Economy and Taxation

The fundamental doctrine of Ricardo's work *Principles of Political Economy and Taxation* is that, on the hypothesis of free competition, exchange value is determined by the labor expended in production. Ricardo's theory of distribution can be briefly enunciated as follows:

1. The demand for food determines the margin of cultivation;
2. this margin determines rent;
3. the amount necessary to maintain the laborer determines wages;
4. the difference between the amount produced by a given quantity of labor at the margin and the wages of that labor determines profit.

A considerable portion of the work is devoted to a study of taxation, which requires to be considered as a part of the problem of distribution. A tax is not always paid by those on whom it is imposed; it is

therefore necessary to determine the ultimate, as distinguished from the immediate, incidence of every form of taxation. Adam Smith had already dealt with this question; Ricardo criticized and developed his results:

The conclusions at which he arrived can be summarized as follows:

- a tax on raw produce falls on the consumer, but will also diminish profits;
- a tax on rents falls on the landlord;
- taxes on houses will be divided between the occupier and the ground landlord;
- taxes on profits will be paid by the consumer, and taxes on wages by the capitalist.

Ricardo also developed a theory of foreign trade, which has been embodied in the two propositions:

1. International values are not determined in the same way as domestic values;
2. the medium of exchange is distributed so as to bring trade to the condition it would be in if it were conducted by barter.

Value theory:

Ricardo's most famous work is his *Principles of Political Economy and Taxation* (1817). Ricardo opens the first chapter with a statement of the labour theory of value. His labour theory of value required several assumptions:

1. Both sectors have the same wage rate and the same profit rate;
2. The capital employed in production is made up of wages only;
3. The period of production has the same length for both goods.

Ricardo himself realized that the second and third assumptions were quite unrealistic and hence admitted two exceptions to his labour theory of value:

1. Production periods may differ;
2. The two production processes may employ instruments and equipment as capital and not just wages, and in very different proportions.

Ricardo continued to work on his value theory to the end of his life.

Ricardo's theories of wages and profits:

Several authorities consider that Ricardo is the source of the concepts behind the so-called Iron Law of Wages, according to which wages naturally tend to a subsistence level. Others dispute the assignment to Ricardo of this idea.

In his *Theory of Profit*, Ricardo stated that as real wages increase, real profits decrease because the revenue from the sale of manufactured goods is split between profits and wages. He said in his *Essay on Profits*,

"Profits depend on high or low wages, wages on the price of necessaries, and the price of necessaries chiefly on the price of food."

Ricardo first gained notice among economists over the "bullion controversy." In 1809 he wrote that England's INFLATION was the result of the Bank of England's propensity to issue excess banknotes. In short, Ricardo was an early believer in the quantity theory of money, or what is known today as MONETARISM.

In his *Essay on the Influence of a Low Price of Corn on the Profits of Stock* (1815), Ricardo articulated what came to be known as the law of diminishing marginal returns. One of the most famous laws of economics, it holds that as more and more resources are combined in production with a fixed resource—for example, as more labor and machinery are used on a fixed amount of land—the additions to output will diminish.

Ricardo also opposed the protectionist Corn Laws, which restricted imports of wheat. In arguing for FREE TRADE, Ricardo formulated the idea of comparative costs, today called COMPARATIVE ADVANTAGE—a very subtle idea that is the main basis for most economists' belief in free trade today. The idea is this: a country that trades for products it can get at lower cost from another country is better off than if it had made the products at home.

Say, for example, Poorland can produce one bottle of wine with five hours of labor and one loaf of bread with ten hours. Richland's workers, on the other hand, are more productive. They produce a bottle of wine with three hours of labor and a loaf of bread with one hour. One might think at first that because Richland requires fewer labor hours to produce either good, it has nothing to gain from trade.

Think again. Poorland's cost of producing wine, although higher than Richland's in terms of hours of labor, is lower in terms of bread. For every bottle produced, Poorland gives up half of a loaf, while Richland has to give up three loaves to make a bottle of wine. Therefore, Poorland has a comparative advantage in producing wine. Similarly, for every loaf of bread it produces, Poorland gives up two bottles of wine, but Richland gives up only a third of a bottle. Therefore, Richland has a comparative advantage in producing bread.

If they exchange wine and bread one for one, Poorland can specialize in producing wine and trading some of it to Richland, and Richland can specialize in producing bread. Both Richland and Poorland will be better off than if they had not traded. By shifting, say, ten hours of labor out of producing bread, Poorland gives up the one loaf that this labor could have produced.

But the reallocated labor produces two bottles of wine, which will trade for two loaves of bread. Result: trade nets Poorland one additional loaf of bread. Nor does Poorland's gain come at Richland's expense. Richland gains also, or else it would not trade. By shifting three hours out of producing wine, Richland cuts wine production by one bottle but increases bread production by three loaves. It trades two of these loaves for Poorland's two bottles of wine. Richland has one more bottle of wine than it had before, and an extra loaf of bread.

These gains come, Ricardo observed, because each country specializes in producing the good for which its comparative cost is lower.

Writing a century before PAUL SAMUELSON and other modern economists popularized the use of equations, Ricardo is still esteemed for his uncanny ability to arrive at complex conclusions without any of the mathematical tools now deemed essential. As economist David Friedman put it in his 1990 textbook, *Price Theory*, "The modern economist reading Ricardo's *Principles* feels rather as a member of one of the Mount Everest expeditions would feel if, arriving at the top of the mountain, he encountered a hiker clad in T-shirt and tennis shoes."¹

One of Ricardo's chief contributions, arrived at without mathematical tools, is his theory of rents. Borrowing from THOMAS MALTHUS, with whom Ricardo was closely associated but often diametrically opposed, Ricardo explained that as more land was cultivated, farmers would have to start using less productive land. But because a bushel of corn from less productive land sells for the same price as a bushel from highly productive land, tenant farmers would be willing to pay more to rent the highly productive land.

Result: the landowners, not the tenant farmers, are the ones who gain from productive land. This finding has withstood the test of time. Economists use Ricardian reasoning today to explain why agricultural price supports do not help farmers per se but do make owners of farmland wealthier. Economists use similar reasoning to explain why the beneficiaries of laws that restrict the number of taxicabs are not cab drivers per se but rather those who owned the limited number of taxi medallions (licenses) when the restriction was first imposed.

Other Contributors of the Classical School of thought:

John Stuart Mill:

John Stuart Mill was an English philosopher, political economist and civil servant. He was born on May 20, 1806, Pentonville, London, United Kingdom and died May 8, 1873, Avignon, France. He was married to Harriet Taylor Mill between 1851 – 1858. John Stuart Mill was educated at University College London.

One of the most influential thinkers in the history of liberalism, he contributed widely to social theory, political theory and political economy.

Under the tutelage of his imposing father, himself a historian and economist, John Stuart Mill began his intellectual journey at an early age, starting his study of Greek at the age of three and Latin at eight. Mill's father was a proponent of Jeremy Bentham's philosophy of utilitarianism, and John Stuart Mill began embracing it himself in his middle teens. Later, he started to believe that his rigorous analytical training had weakened his capacity for emotion, that his intellect had been nurtured but his feelings had not. This perhaps led to his expansion of Bentham's utilitarian thought, his development of the "harm theory," and his writings in the defense of the rights of women, all of which cemented his reputation as a major thinker of his day.

He was among the many lesser contributors to classical economic theory, His *Principles of Political Economy*, although intended by him merely to bring together the works of others, offered some fresh insights into increasing returns to scale and their consequences for the development of monopolies, and anticipated (though not in these terms) the neoclassical concepts of elasticity and the determination of price by the interaction of supply and demand.

In 1832, Jeremy Bentham died, followed closely by James Mill in 1836. With the deaths of his two mentors, Mill discovered that he had even more intellectual freedom. He used that freedom to create a new philosophic radicalism incorporating the ideas of thinkers such as Coleridge and Thomas Carlyle. He also acknowledged that while he was breaking away from Bentham, there were aspects of his mentor's philosophy that he intended to preserve.

The major works started to appear in 1843 with *A System of Logic*, Mill's most comprehensive and systematic philosophical work, which presented Mills' thoughts on inductive logic and the shortcomings of the use of syllogisms (arguments derived from general principles, in which two premises are used to deduce a conclusion) to advance deductive logic.

The year 1859 marked the publication of *On Liberty*, Mills' landmark work on supporting individuals' moral and economic freedom from the government and society at large. In his autobiography, Mill wrote of "the importance, to man and society, of giving full freedom to human nature to expand itself in innumerable and conflicting directions," an idea fully fleshed out in *On Liberty*. In the work, Mill asserts that individuals' opinions and behavior should enjoy free rein, whether in the face of the law or social pressure. Perhaps as a segue into Mill's *Utilitarianism*, which would follow four years later, Mill makes one concession: If a person's behavior harms other people, that behavior should be constrained. The essay has been criticized for various vagaries in its arguments, but it provides an impassioned defense of nonconformity, diversity and individuality.

In 1861, *Utilitarianism* first began appearing in serialized form in *Fraser's Magazine*. The work comes from Mill's association with, and partial break from, the moral philosophy of Jeremy Bentham and would go on to be Mill's most famous work. It bolsters support for Bentham's philosophy and refutes certain misconceptions about it. In sum, utilitarianism as a moral philosophy rests on a single sentence: "Actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness." In his book, Mill argues that utilitarianism stems from "natural" sentiments that exist organically within human beings' social nature.

Therefore, if society were simply to embrace acts that minimize pain and maximize happiness, the standards created would form an easily and naturally internalized code of ethics. In his exploration of this issue, Mill transcends discussions of good and evil, and humanity's fascination with concepts of them, and posits a single criterion for a universal morality.

In his *Principles of Political Economy*, which became the leading economics textbook for forty years after it was written, **John Stuart Mill** elaborated on the ideas of DAVID RICARDO and ADAM SMITH. He helped develop the ideas of economies of scale, OPPORTUNITY COST, and COMPARATIVE ADVANTAGE in trade.

Mill was a strong believer in freedom, especially of speech and of thought. He defended freedom on two grounds. First, he argued, society's utility would be maximized if each person was free to make his or her own choices. Second, Mill believed that freedom was required for each person's development as a whole person. In his famous essay *On Liberty*, Mill enunciated the principle that "the sole end for which mankind are warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection." He wrote that we should be "without impediment from our fellow-creatures, so long as what we do does not harm them, even though they should think our conduct foolish, perverse, or wrong."

Surprisingly, though, Mill was not a consistent advocate of laissez-faire. His biographer, Alan Ryan, conjectures that Mill did not think of contract and PROPERTY RIGHTS as being part of freedom. Mill favored inheritance TAXATION, trade PROTECTIONISM, and REGULATION of employees' hours of work. Interestingly, although Mill favored mandatory EDUCATION, he did not advocate mandatory schooling. Instead, he advocated a voucher system for schools and a state system of exams to ensure that people had reached a minimum level of learning.

Although Mill advocated universal suffrage, he suggested that the better-educated voters be given more votes. He emphatically defended this proposal from the charge that it was intended to let the middle class