Chapter - I
PERSONALITY CHARACTERISTIC OF INTER UNIVERSITY AND INTER COLLEGIATE CRICKET PLAYERS (A COMPARATIVE STUDY)
(STUDY RESTRICTED TO MARATHWADA REGION)

Introduction
Sport psychology focuses on the mental and behavioral processes of humans within the sociocultural context of competitive sport. Within this lies social behavior such as achievement or competition and associated thoughts and feelings: anxiety, self-esteem, and motivation. Sport psychology, the youngest of the sport sciences, became recognized as an academic field of study in the 1970s.

Sport psychology may be divided into four broad areas of study. First, the relationship between personality and sport participation has been widely studied. Second, the largest area of inquiry in sport psychology is attempting to understand motivation as the complex process that influences individuals to begin an activity and pursue it with vigor and persistence. Included in the broad category of motivation would be self-perceptions such as self-confidence, self-esteem, and stress that influence motivational behavior in sport. Third, interpersonal and group processes that influence individuals’ behaviors in sport, such as the presence of spectators, group membership, and leadership, are studied in sport psychology. Included in this area are aggression and gender socialization, which are behaviors or characteristics that result from interpersonal social processes. Fourth, the area of mental training or psychological-skills training encompasses the use of intervention techniques to learn cognitive skills and behavioral strategies that can enhance sport performance and personal development.

History

Around 1900, researchers first began to assess how the presence of others affected motor performance, an area that became known as social facilitation. However, the true beginning of sport psychology dawned with the work of Coleman Griffith, who as a professor at the University of Illinois engaged in the first systematic examination of
the psychological aspects of sport between 1919 and 1938. He was also hired by Phillip Wrigley in 1938 as a sport psychology consultant for the Chicago Cubs baseball team, the first psychologist to consult with a professional sport team.

Psychological research with athletes began in Eastern European countries in the 1950s as part of the Soviet space program’s exploration of mental techniques to enhance the performance of cosmonauts. The field grew through the 1980s in these countries under the control of central governments, which mandated research objectives targeted to improvements in self-regulation and performance. Clearly, these research objectives were politically motivated to promote excellence in international sports competition as an outgrowth of the socialist system.

In North America, sport psychology largely lay dormant after Coleman Griffith’s time until the 1960s. This decade saw an upsurge of interest in personality and social facilitation research and the founding of several professional organizations. The 1970s saw the emergence of sport psychology as a legitimate scientific subdiscipline of psychology. Systematic research programs were established at several universities, graduate study became available, and the Journal of Sport Psychology began publication in 1979. Much of the research during this time was experimental laboratory study, testing theory from the parent discipline of psychology. It was not until the 1980s that the field expanded with a growth in field research and increased interest in applied sport psychology or mental training with athletes. In 1985, the U.S. Olympic Committee hired the first full-time sport psychologist to oversee the research program and mental preparation of all Olympic sport programs in America. By the 1990s, sport psychology was studied and practiced throughout the world as respect for the young field grew with increasing awareness of the mind-body link that influences not only sport performance, but overall health and well-being.

Sport psychology, as the systematic scholarly study of human thought, emotion, and behavior in sport contexts, consists of four main areas: personality and sport participation, motivational processes, interpersonal and group processes, and intervention techniques to enhance sport performance and personal development.
Personality and Sport Participation

Personality is the unique blend of the psychological characteristics and behavioral tendencies that make individuals different from and similar to each other. Interestingly, the popular notion that distinct personality types exist in sport has not been supported by research. Also, no consistent personality differences between athletic subgroups (e.g., team versus individual sport athletes) have been shown to exist. Successful athletes have a more positive mood profile, more self-confidence, and more better strategies to focus attention and manage anxiety.

Sport psychology has also examined the effects of sport participation on personality development and change. Traditionally, Americans have believed the notion that “sport builds character” or that socially valued personality attributes may be developed through sport participation. However, research emphatically shows that competition serves to reduce prosocial behaviors such as helping and sharing, and this effect is magnified by losing. Sport participation has been shown to increase rivalrous, antisocial behavior, and aggression, and sport participation has also been linked to lower levels of moral reasoning. However, research in a variety of field settings has demonstrated that children’s moral development and prosocial behaviors (cooperation, acceptance, sharing) can be enhanced in sport settings when adult leaders structure situations to foster these positive behaviors.

Motivational Processes

Motivation is a complex process that influences individuals to begin, pursue, and persist in an activity. Intrinsic motivation is self-fueling over the long term because it is based on controllable feelings of enjoyment and competence; extrinsic motivation relies on external reinforcers from the social environment. Current theory views motivation as a cognitive process in which our behavior is a direct result of how we think and process information about ourselves and the world. The one common thread in the many theories of motivation is that people are motivated to feel competent, worthy, and self-determining. From birth, we all try to be competent in our environment. As our lives continue, our need to be competent is channeled in various areas through socialization. Thus, people differ in their motivation to achieve certain
things. Several important factors fuel this intrinsic motivation to be competent and self-determining. First, we all feel competent for different reasons. Research in exercise and sport psychology has shown that individuals have different goals for achievement and that to truly understand motivation we must understand how each person defines success or competence for him or herself. Another important factor that influences motivation is what psychologists call perceptions of control. Humans are motivated to be self-determining, which means we want to be in control of our own actions and behavior. Individuals with more internal perceptions of control are more motivated than individuals who feel others control them or that they are lucky. Two important psychological constructs that affect motivation are self-esteem and self-confidence. Self-esteem is our perception of personal worthiness and the emotional feelings associated with that perception. Many psychologists view self-esteem as the most central core component of our identity, and thus it has a major influence on our motivation in sport and exercise. Self-worth or self-esteem is an important need for all individuals and it emanates from feeling competent and in control of our behavior in an achievement area that is important to us. The literature emphasizes that self-esteem is the direct result of social interactions, so social support and positive reinforcement for individual mastery attempts are crucial to the development of self-esteem. Self-confidence is also a critical factor in motivation and is similar to perceived competence. Athletes who feel more competent and self-confident are motivated to work harder to perform better in their sport. As with self-esteem, if we lack confidence in our ability, we need elaborate extrinsic incentives to motivate us.

Feedback and reinforcement can be used in a positive way to enhance peoples’ feelings of competence, which then increases their intrinsic motivation. This area, called behavior modification, has been developed from animal research in psychology and deals with how the use of reinforcers influences human behavior. The fundamental assumption of behavior modification is that behaviors are strengthened when they are rewarded and weakened when they are punished or unrewarded. Extrinsic rewards are common in sport, such as trophies, scholarships, and even large salaries in professional sports. Research indicates that extrinsic rewards given in competition may serve to weaken or undermine existing intrinsic motivation. If the
extrinsic rewards associated with competition are perceived as controlling by individuals, then intrinsic motivation decreases as individuals feel less self-determining. Motivation involves intensity of behavior and the urge to be competent and successful. It is easy to see, then, that for some people this motivation, which was once positive and enjoyable, turns into anxiety and becomes stressful. The popular notion of “psyching up” by athletes refers to their levels of arousal, which is defined as physical and psychological readiness to perform. Think of arousal as a specific state of motivation in a particular situation. A popular misconception is that you can never be too motivated or highly aroused, but research has shown that high levels of arousal can hurt performance. Studies have shown that arousal is related to performance in a curvilinear or inverted-u model, which means that as arousal increases, performance increases to an optimal zone, after which further increases in arousal hurt performance. Optimal arousal is very personal—every individual has a unique optimal arousal zone. Another consideration in arousal is the type of task a person is performing. Complex and precise physical activities, such as putting in golf or shooting in archery, require lower levels of arousal for optimal performance as compared to those that use gross motor skills, such as football blocking or playing soccer.

**Sport Psychology, Motivation and Performance**

When arousal passes the optimal zone, it usually becomes anxiety. Anxiety, then, is simply a negative response to a stressful situation in which athletes feel apprehension and threat to their self-esteem. Individual sport activities, such as wrestling and gymnastics, have been shown to elicit higher anxiety levels than competitive team sport activities, such as softball and basketball. This is because, with no teammates, athletes feel more personal pressure to perform well. This phenomenon carries over to competitive nonsport activities as well.

Stress and anxiety are not synonymous. Stress is defined as a perceived imbalance in what a person thinks he can do and what the situation demands, when the outcome matters. Much intervention in sport psychology focuses on reducing
athletes’ perceptions of stress, most of which, in sport, is based on fear of failure and fear of evaluation.

Interpersonal and Group Processes

Sport psychology also looks at interpersonal or group processes that influence individuals’ behaviors, such as the presence of spectators, group membership, and leadership. Also, aggression and gender socialization result from interpersonal social processes. Since the start of the 20th century, researchers have been fascinated with the effects of an audience on human performance or social facilitation. Findings suggest that the presence of other people increases our arousal, which then may hurt or help our performance. Generally, spectators have a negative effect on someone who is learning a skill and a positive effect on someone who is very skilled. It is not the mere presence of others that causes this effect, but rather peoples’ perceptions that they were being evaluated by others. Researchers have also documented the “home advantage,” which shows that teams playing at home sites win a greater percentage of the time as compared to playing at away sites. However, the reasons for this home advantage are less clear and could even be attributed to expectancy, a self-fulfilling prophecy.

Group dynamics focuses on how being a part of a group influences performance as well as how psychosocial factors influence group behavior. Groups perform better, and group members are more satisfied, when they are cohesive, that is, they stick together and remain united in pursuing goals. Cohesion is facilitated by emphasizing uniqueness or a positive identity related to group membership and also when individual team members understand and accept their role within the group.

Also of interest in group dynamics is how group membership influences individual performance. Social loafing refers to a decrease in individual performance within groups. Individuals believe their performance is not identifiable and responsibility is diffused within the group. Social loafing, studies show, is easily reduced by monitoring performance and so making individuals more identifiable.
Effective leadership—influencing individuals and groups toward goals— influences sport participation enormously. Early research in this area sought a set of traits that defined effective leadership. This proved inconclusive; rather, leadership involves a process of interaction unique to a situation, depending on the characteristics of the athletes and those of the leader. The social processes of competition in Western society are often seen as leading to aggression in sport—behavior directed toward inflicting harm or injury onto another person. In competitive situations, frustration inevitably fuels aggression. Frustration often results when a person’s goals are blocked and, in competitive sport, the main objective is to block the goal achievement of the opponent. Social learning theory views aggression as a learned behavior. Thus, ice hockey players are glorified for fighting with opponents, and baseball players are encouraged and even expected to charge the mound and go after the pitcher if hit by a pitched ball. Research also links aggression to levels of moral reasoning. Athletes have lower levels of moral reasoning and so view aggression as more legitimate, compared to nonathletes. It is popularly believed that competition reduces aggressive impulses in humans by providing a release or purging of aggression (called catharsis). However, studies suggest that aggressive tendencies increase after competing, engaging in vigorous physical activity, or watching a competitive event. Thus, competitive and physical activity participation and spectatorship do not serve as a catharsis for aggressive responses. The social processes of gender formation and maintenance have been studied extensively, with important implications for sport behavior. A popular myth is that differences in the thoughts, feelings, behaviors, and physical performance capacities between males and females are biologically based. This explanation ignores the social complexity and variations in gender-related behavior and performance. However, males and females overlap substantially on all motor skills. This means that although the most highly trained male is stronger than the most highly trained female, some females are stronger than many males. Thus, although our society loves to assume that all females and males are stereotypically grouped according to popular beliefs about limits of sport and exercise performance, males and females actually are more similar than they are different. And most of the gender differences that are apparent in sport behavior are based not on biology, but rather on the differential socialization patterns of girls and boys, which typically
advantage boys in terms of opportunity, support, and expectations for sport proficiency.

Gender differences are also assumed and have been found on various psychological characteristics such as self-confidence, aggression, and competitiveness. These differences, however, develop over time and are influenced by rigid gender socialization. Much gender research has not considered socialization and thus has reinforced existing and limiting gender stereotypes. Sport is a very sex-typed area; popular culture views it as more appropriate for males than females. This view exerts powerful socialization influences on young girls in deciding whether or not to participate. It is no coincidence that girls become less active in sports and physical activity at puberty, when society gives them the message that they now should focus on more “appropriate” activities in preparation for womanhood. Intervention Techniques for Exercise and Sport Often called mental training or psychological skills training, intervention techniques are used to learn behavioral strategies (e.g., goal setting) and cognitive skills (e.g., self-talk) that can enhance exercise and sport behavior. Intervention techniques may be used to improve sport performance, develop important life skills for young people participating in physical activity, aid in rehabilitation from injury and disease, and enhance career transition and retirement from sport. Intervention strategies aim to maximize the chances of achieving “flow,” or peak performance. Flow occurs when our abilities match the challenge of the situation, so effective goal setting allows individuals to plan and focus on specific challenges that push them to achieve based on personal ability levels.

Goal setting is used to focus on specific attainable behaviors presented as difficult yet reachable goals. Goals are most effective if they are difficult and systematically monitored and evaluated. Also effective in goal-setting is the use of short-term goals as progressive steps toward reaching a long-term goal and emphasizing on performance or controllable goals over outcome. Self-talk, or personal statements that we all make to ourselves, also works as an intervention technique. There are many variations of this technique, but the basic premise is that what we say to ourselves drives our behaviors. The goal of effective self-talk is to engage in planned, intentional productive thinking that convinces your body that you are confident, motivated, and
ready to perform. Athletes are taught to identify key situations or environmental stressors that cause them to “choke” and then plan and mentally practice a refocusing plan that can be used to focus attention appropriately in that situation.

Attention control and focusing is perhaps the most important cognitive skill at the point of sport competition. Athlete’s performance depends on the cues they process from themselves and the social and physical environment. Self-talk strategies such as “centering” allow athletes and exercisers to select relevant cues and design physiological (e.g., deep breaths) and psychological (e.g., feeling strong, quick, and confident) triggers to best focus attention.

Imagery is using all the senses to create or re-create an experience in your mind or a mental technique that “programs” the mind to respond as desired. Imagery enhances motor performance, studies show, and although it cannot replace physical practice, it is better than no practice at all. Elite athletes regularly use imagery and is often cited as an important mental factor in their success. Novice athletes can use imagery to create positive mental blueprints of successful performances, while exercisers can use imagery to visualize their muscles firing and getting stronger during fitness training.

Physical relaxation techniques are used to teach individuals to control their autonomic functions, including muscular and hormonal changes that occur during sports and exercise. These techniques allow individuals to engage in physical activity with much greater mastery and control over how their bodies respond to competitive stimuli. Some physical relaxation techniques include breathing exercises, muscular tension-relaxation, and various types of meditation. For example, athletes can learn how to regulate physiological arousal by reducing their heart and breathing rates to induce a more relaxed state. Physical relaxation techniques can be used in conjunction with goal setting, imagery, and self-talk to optimize both physical and cognitive readiness to perform.

In summary, sport psychology, a young science, has only begun to scratch the surface of understanding the thoughts, feelings, and behaviors related to participation in physical activity. But the knowledge base that has developed over the last three
decades is impressive as research continues to study personality, motivation, group processes, and intervention techniques related to sport.

Sports psychology: Mental toughness: do you have what it takes to maintain focus, motivation and self-belief when the going gets hard?

There are certain moments during competition that appear to carry great psychological significance, when the momentum starts to shift in one direction or another. These situations require athletes to remain completely focused and calm in the face of difficult circumstances. Tennis players talk of the ‘big’ points during a tight match, such as a fleeting chance to break serve; for an athlete, it could be the final triple-jump in the competition after seriously under-performing; for a footballer, it could be how you react to a perceived bad refereeing decision or to going behind in a match your team are expected to win. Think about times when things have not gone quite to plan and how you reacted. The journey towards peak performance is rarely a perfectly smooth road and we learn from our mistakes – or should do. Do setbacks shake your self-belief and lower your motivation or act as a catalyst for even greater effort?

Even great athletes and teams suffer setbacks. Olympic athlete Steve Backley is a prime example. In his book The Winning Mind, Backley cites his psychological strengths and, at times, his weaknesses as major determinants of whether he performed near to or below his own strict targets in competition (1). He talks of the transition from young up-and-coming javelin thrower to major international competitor when, after experiencing success so often as a junior, he found himself under-prepared for the mental hurdles and barriers created by higher-level competition. Backley says psychological strategies were the key to helping him to deal with this competitive stress.

Most top athletes and coaches believe that psychological factors play as crucial a role as physical attributes and learned skills in the make-up of champions. When physical skills are evenly matched – as they tend to be in competitive sport – the competitor with greater control over his or her mind will usually emerge as the victor. Mental
strength is not going to compensate for lack of skill, but in close contests it can make
the difference between winning and losing.

A key question for sport and exercise psychologists is whether champions have
simply inherited the dominant psychological traits necessary for success or whether
mental toughness can be acquired through training and experience. Recent research
has attempted to explore the concept of mental toughness in sport more thoroughly,
and it appears that, while some people are naturally more tough-minded than others,
people can be ‘toughened-up’ with the correct approach to training (2).

What do we mean by mental toughness? It is probably easiest to define in terms of
how it affects behaviour and performance. A mentally tough athlete is likely to:

* achieve relatively consistent performances regardless of situational factors;
* retain a confident, positive, optimistic outlook, even when things are not going
  well, and not ‘choke’ under pressure;
* deal with distractions without letting them interfere with optimal focus;
* tolerate pain and discomfort;
* remain persistent when the ‘going gets tough’;
* have the resilience to bounce back from disappointments.

The influence of personality

These characteristics are obviously related to success in most life situations. But it
seems that some of us may be tougher than others because of personality traits and
learned ways of coping.

Personality research has always stirred up controversy – usually because researchers
have not been able to agree on the correct approach to studying it. Some have taken
what is known as the ‘trait’ approach, which views personality as stable and enduring,
based on individual characteristics. However, others see personality as shaped by
environmental influences, while ‘interactionists’ view individual traits and the
environment as codeterminants of behaviour. In recent times, this latter position has
tended to predominate, based on the view that personality structure involves both a stable core of attitudes, values and beliefs about self, that remains relatively unchanged after early childhood, and more changeable, dynamic behaviours that are influenced by our environment.

Research on the relationship between stress and illness has revealed that some people have characteristics that act as buffers against stressors, making them less likely to succumb to ill health in difficult times. The leading researcher Suzanne Kobasa showed in one study that a personality characteristic known as ‘hardiness’ was a key factor in whether or not highly-stressed executives succumbed to illness. The hardy executives, who avoided illness, tended to perceive stressors as ‘challenges’ rather than threats, so maintaining a sense of control over events (3).

Kobasa suggested that hardiness incorporates three key elements:

1. Control – the perceived ability of the individual to exert influence rather than experience helplessness;
2. Commitment – ie a refusal to give up easily;
3. Challenge – involving a person’s ability to grow and develop rather than remain static, and to view change rather than stability as the norm.

Until recently, few studies had attempted to transfer the concept of hardiness to sport and exercise settings, but it seems very similar to the idea of mental toughness outlined earlier in this article. One study on the relationship between hardiness and performance in basketball showed that seven out of eight season-long performance indicators were significantly correlated with a total hardiness score (4). This finding needs to be interpreted with caution, however, since correlations do not necessarily reflect causation.

More recently, a team of researchers at Hull University have taken the idea of hardiness a step further by proposing a model of mental toughness in sport(2). A key development has been the development of a questionnaire to assess mental toughness that can be used to assess its influence in experimental studies.
The Hull researchers carried out two studies to show how mental toughness was related to performance and cognitive appraisal. In the first study, 23 volunteers performed 30-minute static cycling trials at three different intensities of 30, 50 and 70% of their maximum oxygen uptake, rating the physical demands of the trials at five-minute intervals.

Participants were classified as having either high or low mental toughness based on their responses to the above-mentioned questionnaire and, as predicted, those with higher levels of mental toughness reported significantly lower perceived exertion at 70% of maximum. No significant differences were noted at lower levels of exertion which, as the researchers acknowledged, is consistent with the cliché that ‘when the going gets tough, the tough get going’. The observed differences at higher levels of exertion could reflect a tendency of the more tough-minded to somehow act on the incoming stimuli before it reaches the level of perception, to reduce the perception of strain. Mentally tough exercisers might perceive themselves as having greater control during such conditions, or interpret the higher intensity as a challenge rather than a threat.

The second study, on 79 participants, considered the influence of mental toughness on resilience in adverse situations. Participants were given either positive or negative feedback after completing a variety of motor tasks, and then asked to perform a planning task which was used as the objective performance measure. The key question for the researchers was how participants would respond to feedback that could alter their confidence. As predicted, mentally tough participants performed better on the planning task, delivering relatively consistent performances whether their feedback had been negative or positive. However, those with lower levels of mental toughness performed significantly worse after negative feedback, confirming the greater resilience of those with high levels of mental toughness.

The ‘4Cs’ model of mental toughness
Building on the work of Kobasa, the Hull team proposed that confidence (as well as control, commitment and challenge) was a key element of mental toughness. This has given rise to the ‘4Cs’ model of mental toughness.

Research on mental toughness in sport and exercise has focused largely on individual differences, in which mental toughness is viewed as a relatively stable characteristic. However, classic previous research on animals has suggested that ‘toughening up’ can be achieved through exposure to stressful conditions. Weiss and colleagues observed a toughening phenomenon after exposing animals to cold-water swimming, electric shock treatment or injections over a 14-day period (5). Specifically, the usual decrement in performance following aversive stimulation was not observed after the 14-day period. The intermittent exposure to aversive stimuli had apparently led to the animals becoming more tolerant of – and resilient to – such stimuli.

Although this finding does not necessarily transfer to human subjects, there are distinct parallels with various techniques commonly used as interventions in sport and exercise environments. For example, a technique known as ‘stress inoculation training’ gradually exposes the individual to more threatening situations while self-control is acquired as a means to combat learned helplessness. The stress response is gradually diminished as exposure renders the situation less threatening and the individual experiences a growing sense of control.

Of particular importance here is the idea that exposure to stress in controlled situations is much more powerful than stress reduction or removal, which will not help an individual cope with future exposure to the same stressor.

One researcher has proposed four major influences on toughening, as follows:

1. Early life experiences. Both human and animal studies have shown links between exposure to stressors in early life and reduced fear or emotionality when exposed to threats in adulthood;
2. Passive toughening. Intermittent exposure seems to protect against depletion of ‘stress hormones’ and is linked with their quicker returns to baseline levels. In other words, people become less sensitive and more tolerant of stress;

3. Active toughening. Physical fitness gained through aerobic conditioning is thought to be an important means of self-toughening. This could be related to the application of control;

4. Ageing. This has the opposite effects to the other three, tending to make people more sensitive to and less tolerant of stress.

Clearly, active and passive toughening are the most relevant manipulations for athletes and can be applied in a number of practical ways. Stress inoculation training is an obvious application, but this is probably best approached with the aid of a sport psychologist. Since I am a sport psychologist, I will give some examples of how mental over-load may be applied to training sessions in order to achieve some degree of toughening.

Rod Laver, the Australian tennis legend, has described how he used practice sessions to simulate ‘tough’ match conditions (7). Laver felt that fatigue placed great strain on the concentration which was crucial to success in long matches. To simulate these conditions, Laver forced himself to concentrate and work even harder during the latter stages of training sessions, when he was tired, so that he became used to the mental strain of such conditions. He has cited this as one of the key factors in his long-lasting success.

Simulation training is a great way to prepare mentally for the challenges of competition, and this can include mental as well as physical stressors. For example, a tennis player could increase the mental pressures in a practice match by starting each service game 0-15 down, and thus getting used to ‘rebounding’ after losing the first point. Alternatively a player with an over-reliance on his first serve could be restricted to one serve only and be forced to become extremely focused and accurate with what is, in effect, a second serve.
To enhance the stress still further, players could practise by playing tiebreakers, or play practice matches in front of an audience. The coach might use bad line calls or spectator noise as a way of exposing players intermittently to distractions and giving them practice at dealing with them.

Tennis is a game with plenty of breaks between play that allow time for dwelling on past events or self-doubting. Using imagery and positive self-talk during dead time in order to remain calm and in control can be an effective strategy. Mentally tough competitors are likely to use strategies that reinforce their self-belief at times of crisis. And these strategies can be rehearsed in practice situations.

With a little invention, simulation training can be used for most athletes, and the opportunity to deal with mental stressors in controlled situations can be an invaluable way to toughen up in preparation for the very real challenges of competition.
Personality development training

Personality development is essential for every individual and this implies for people of all age groups. Whether you are a student, busy executive, a government employee or sportsman, personality development is essential for all. In the spheres of corporate world, personality development holds even more significance. According to one study, many qualified and talented professionals fail to find a suitable job or are not able to climb the corporate ladder because of lack of certain personality traits. These traits range from lack of confidence, low self-esteem, poor relationship building skills to not so good presentation skills and poor communication skills. Talent and knowledge alone don’t take one too far. These basics need to be supported by well rounded personality traits.

Business enterprises have understood such situations quite well and have focused upon conducting personality development seminars or training sessions. Some of the famous corporate trainers and renowned personality development specialists are called upon to address issues faced by the in-house employees. This is a mutually beneficial arrangement as organizations gain from enhanced personalities of employees and the workforce gain from new insights and issues earlier addressed. Compared to going whole hog to hiring new employees, recruitment and training related costs, such programs consisting of personality development presentations are much more cost-effective and beneficial.

Usually personality development training covers several aspects of human growth right from personal to professional ones. Some programs focus more on general aspects faced by each and every individual like confidence, self-esteem, communication skills and people handling skills by providing personality development module. Some other programs are more specific in nature and cater to honing particular skill sets. The later one is more preferable mode of training in organizational set-up. The skill sets could be developing leadership quality, professional responsibilities, managerial skills and about increasing productivity. Such training programs also include personality development activities with a focus on enhancing professionalism and employee’s level of competency.
There are numerous benefits of personality development training programs. It helps in all round personality growth of an individual. Professionally, it proves to be of immense significance in boosting an individual’s career. Training seminars also bring together professionals from different departments together and that helps in fostering better bonding and understanding. Many professionals decide to join such Personality development power point presentations to build expertise in business. Professionally, personality development training is recommended for diverse range of professions including teaching, nursing, career counseling, management and technicians. Life has become too demanding and to cope up with resulting stress and difficulty, personality development programs come very handy.

**Sport**

A sport is commonly defined as an organized, competitive, and skillful physical activity requiring commitment and fair play. It is governed by a set of rules or customs. In a sport the key factors are the physical capabilities and skills of the competitor when determining the outcome (winning or losing). The physical activity involves the movement of people, animals and/or a variety of objects such as balls and machines. In contrast, games such as card games and board games, though these could be called mind sports, require only mental skills. Non-competitive activities such as jogging and rock-climbing, are usually classified as recreations.

Physical events such as scoring goals or crossing a line first often define the result of a sport. However the degree of skill in some sports such as diving, dressage and figure skating is judged according to well-defined criteria. This is in contrast with other judged activities such as beauty pageants and body-building shows, where skill does not have to be shown and the criteria are not as well defined.

Accurate records are kept and updated for most sports at the highest levels, while failures and accomplishments are widely announced in sport news. Sports are most often played just for fun or for the simple fact that people need exercise to stay in good physical condition. However professional sport is a major source of entertainment.
Although they do not always succeed, sports participants are expected to display good sportsmanship, standards of conduct such as being respectful of opponents and officials, and congratulating the winner when losing.

**History of sport**

The history of sport probably extends as far back as the existence of people as purposive sportive and active beings. Sport has been a useful way for people to increase their mastery of nature and the environment. The history of sport can teach us a great deal about social changes and about the nature of sport itself. Sport seems to involve basic human skills being developed and exercised for their own sake, in parallel with being exercised for their usefulness. It also shows how society has changed its beliefs and therefore there are changes in the rules. Of course, as we go further back in history the dwindling evidence makes the theories of the origins and purposes of sport difficult to support. Nonetheless, its importance in human history is undeniable.

**Antiquity**

Sports that are at least two and a half thousand years old include hurling (similar to field hockey) in Ireland, harpastum (similar to rugby) in Rome, cuju (similar to association football) in China, and polo in Persia. The Mesoamerican ballgame originated over three thousand years ago.

There are artifacts and structures that suggest that the Chinese engaged in sporting activities as early as 4000 BC. Gymnastics appears to have been a popular sport in China's ancient past. Monuments to the Pharaohs indicate that a number of sports, including swimming and fishing, were well-developed and regulated several thousands of years ago in ancient Egypt. Other Egyptian sports included javelin throwing, high jump, and wrestling. Ancient Persian sports such as the traditional Iranian martial art of Zourkhaneh had a close connection to the warfare skills. Among other sports that originate in Persia are polo and jousting.

Depictions of ritual sporting events are seen in the Minoan art of Bronze Age Crete (from approximately 2700 to 1450 BC), mainly involving religious bull-leaping and
possibly bullfighting. Homer tells us that sport was practised in Mycenaean times, between 1600 BC and ca. 1100 BC. In the Iliad there are extensive descriptions of funeral sports games held in honour of deceased warriors, and engaging in sports is described as the occupation of the noble and wealthy, who have no need to do manual labour themselves. In the Odyssey, king Odysseus of Ithaca proves his royal status to king Alkinoös of the Phaiakes by showing his proficiency in throwing the javelin. It was predictably in Greece that sports were first instituted formally, with the first Olympics recorded in 776 BC in Olympia, where they were celebrated until 393 AD. Initially a single sprinting event, the Olympics gradually expanded to include several footraces, run in the nude or in armor, boxing, wrestling, *pankration*, chariot racing, long jump, javelin throw, and discus throw. A variety of informal and formal games were popular in Ancient Greece, with the most prestigious ones achieving Panhellenic status. Some games, e.g. the Panathenaia of Athens, included musical, reading and other non-athletic contests in addition to regular sports events. High-profile athletes were major celebrities in Ancient Greece. City walls were torn down when victors returned home, as a city of such men was said to be in no need for walls to defend itself. They were often granted lifetime pensions or dining rights at public expense. Regardless of such material rewards granted afterwards, the most prestigious games were strictly *stephanítai* (from the Greek: στέφανος, stéphanos, a wreath or crown of plant branches), i.e. the only prize awarded was a wreath and the athletes competed for glory alone.

**Middle Ages**

For at least seven hundred years, entire villages have competed with each other in rough, and sometimes violent, ballgames in England (Shrovetide football) and Ireland (caid). In contrast, the game of calcio Fiorentino, in Florence, Italy, was originally reserved for the aristocracy. The aristocracy throughout Europe favoured sports as patrons. Horse racing, in particular, was a favourite of the upper class in Great Britain, with Queen Anne founding the Ascot Racecourse.

**Development of modern sport**

Writing about cricket in particular, John Leach (2005a) have explained the role of Puritan power, the Civil War, and the Restoration of the monarchy in England. The
Long Parliament in 1642 "banned theatres, which had met with Puritan disapproval. Although similar action would be taken against certain sports, it is not clear if cricket was in any way prohibited, except that players must not break the Sabbath. In 1660, "the Restoration of the monarchy in England was immediately followed by the reopening of the theatres and so any sanctions that had been imposed by the Puritans on cricket would also have been lifted."[4] He goes on to make the very important point that political, social and economic conditions in the aftermath of the Restoration encouraged excessive gambling, so much so that a Gambling Act was necessary in 1664. It is certain that cricket, horse racing and boxing (i.e., prizefighting) were financed by gambling interests. Leach explains that it was the habit of cricket patrons, all of whom were gamblers, to form strong teams through the 18th century to represent their interests. He defines a strong team as one representative of more than one parish and he is certain that such teams were first assembled in or immediately after 1660. Prior to the English Civil War and the Commonwealth, all available evidence concludes that cricket had evolved to the level of village cricket only where teams that are strictly representative of individual parishes compete. The "strong teams" of the post-Restoration mark the evolution of cricket (and, indeed of professional team sport, for cricket is the oldest professional team sport) from the parish standard to the county standard. As he rightly says, this was the point of origin for major, or first-class, cricket.1660 also marks the origin of professional team sport. A number of the English Public Schools, such as Winchester and Eton, introduced sports for their pupils, particularly variants of football. These were described at the time as "innocent and lawful," certainly in comparison with the rural games. With the coming of the Industrial Revolution and the movement of the populace from the country to the cities, the rural games moved to the new urban centres and came under the influence of the middle and upper classes. The rules and regulations devised at English public schools began to be applied to the wider game, with governing bodies in England being set up for a number of sports by the end of the 19th century. The rising influence of the upper class also produced an emphasis of the amateur, and the spirit of 'fair play'. The industrial revolution also brought with it increasing mobility, and created the opportunity for English public schools, and universities in Britain and elsewhere, to compete with each other. This sparked increasing attempts to unify and reconcile various public school games in England,
leading to the establishment of the Football Association in London, the first official governing body in football.

**Modern history**

The influence of British sports and their codified rules began to spread across the world in the late 19th and early 20th century, particularly association football. A number of major teams elsewhere in the world still show these British origins in their names, such as AC Milan in Italy, Corinthians in Brazil, and Athletic Bilbao in Spain. Cricket became popular in several of the nations of the then British Empire, such as Australia, South Africa and India. The revival of the Olympic Games by Baron Pierre de Coubertin was also heavily influenced by the amateur ethos of the English public schools. Baseball became established in the urban Northeastern United States, with the first rules being codified in the 1840s, while American football was very popular in the south-east. With baseball spreading to the south, and American football spreading to the north after the Civil War. In the 1870s the game split between the professionals and amateurs; the professional game rapidly gained dominance, and marked a shift in the focus from the player to the club. The rise of baseball also helped squeeze out other sports such as Cricket, which had been popular in Philadelphia prior to the rise of Baseball. American football also has its origins in the English variants of the game, with the first set of intercollegiate football rules based directly on the rules of the Football Association in London. However, Harvard chose to play a game based on the rules of Rugby football. Walter Camp would then heavily modify this variant in the 1880s, with the modifications also heavily influencing the rules of Canadian football. Some historians—notably Bernard Lewis—claim that team sports are primarily an invention of Western cultures. The traditional teams sports, according to these authors, springs from Europe, primarily England. This ignores some of the ancient games of cooperation from Central America and the Indian subcontinent. The Industrial Revolution and mass production brought increased leisure which allowed increases in spectator sports, less elitism in sports, and greater accessibility. With the advent of mass media and global communication, professionalism became prevalent in sports. This further sports popularity in general. Perhaps in a reaction to the demands of contemporary life, there have been developments in sport that are best described as post-modern: extreme ironing being a
A notable example. There is also a move towards adventure sports as a form of escaping or transcending the routines of life, examples being white water rafting, paragliding, canyoning, BASE jumping, Parkour and more genteelly, orienteering. The history of sport education is an important topic of the political history.

**Women's sport history**

Women's competition in sports has been frowned upon by many societies in the past. The English public-school background of organised sport in the 19th and early 20th century led to a paternalism that tended to discourage women's involvement in sports, with, for example, no women officially competing in the 1896 Olympic Games. The 20th century saw major advances in the participation of women in sports, although women's participation as fans, administrators, officials, coaches, journalists, and athletes remains in general less than men's. Mass involvement tends to favour sports such as swimming and aerobics, and tends to stress the competitive aspects less than men. The increase has been partly related to the drive for more women's rights. In the United States, female students participation in sports was significantly boosted by the Title 9 Act in 1972, preventing gender discrimination and equal opportunity for women to participate in sport at all levels. Pressure from sports funding bodies has also improved gender equality in sports. For example the Marylebone Cricket Club (MCC) and the Leander Rowing Club in England had both been male-only establishments since their founding in 1787 and 1818, respectively, but both opened their doors to female members at the end of the 20th century at least partially due to the requirements of the United Kingdom Lottery Sports Fund.

**Sportsmanship**

Sportsmanship is an attitude that strives for fair play, courtesy toward teammates and opponents, ethical behaviour and integrity, and grace in victory or defeat.

Sportsmanship expresses an aspiration or ethos that the activity will be enjoyed for its own sake. The well-known sentiment by sports journalist Grantland Rice, that it's “not that you won or lost but how you played the game,” and the Modern Olympic creed expressed by its founder Pierre de Coubertin: "The most important thing . . . is not winning but taking part" are typical expressions of this sentiment.
Violence in sports involves crossing the line between fair competition and intentional aggressive violence. Athletes, coaches, fans, and parents sometimes unleash violent behaviour on people or property, in misguided shows of loyalty, dominance, anger, or celebration. Rioting or hooliganism are common and ongoing problems at national and international sporting contests.

**Professionalism**

The entertainment aspect of sports, together with the spread of mass media and increased leisure time, has led to professionalism in sports. This has resulted in some conflict, where the paycheck can be seen as more important than recreational aspects, or where the sports are changed simply to make them more profitable and popular, thereby losing certain valued traditions.

The entertainment aspect also means that sportsmen and women are often elevated to celebrity status.

**Politics**

At times, sports and politics can have a large amount of influence on each other.

When apartheid was the official policy in South Africa, many sports people, particularly in rugby union, adopted the conscientious approach that they should not appear in competitive sports there. Some feel this was an effective contribution to the eventual demolition of the policy of apartheid, others feel that it may have prolonged and reinforced its worst effects.

The 1936 Summer Olympics held in Berlin was an illustration, perhaps best recognised in retrospect, where an ideology was developing which used the event to strengthen its spread through propaganda.

In the history of Ireland, Gaelic sports were connected with cultural nationalism. Until the mid 20th century a person could have been banned from playing Gaelic football, hurling, or other sports administered by the Gaelic Athletic Association (GAA) if she/he played or supported soccer, or other games seen to be of British origin. Until recently the GAA continued to ban the playing of soccer and rugby union at Gaelic
venues. This ban is still enforced, but has been modified to allow football and rugby be played in Croke Park while Lansdowne Road is being redeveloped. Until recently, under Rule 21, the GAA also banned members of the British security forces and members of the RUC from playing Gaelic games, but the advent of the Good Friday Agreement in 1998 led to the eventual removal of the ban.

Nationalism is often evident in the pursuit of sports, or in its reporting: people compete in national teams, or commentators and audiences can adopt a partisan view. On occasion, such tensions can lead to violent confrontation among players or spectators within and beyond the sporting venue (see Football War). These trends are seen by many as contrary to the fundamental ethos of sports being carried on for its own sake and for the enjoyment of its participants.

**Physical art**

Sports have many affinities with art. Ice skating and Tai chi, and Dancesport for example, are sports that come close to artistic spectacles in themselves. Similarly, there are other activities that have elements of sport and art in their execution, such as artistic gymnastics, Bodybuilding, Parkour, performance art, Yoga, bossaball, dressage, culinary arts, etc. Perhaps the best example is Bull-fighting, which in Spain is reported in the arts pages of newspapers. The fact that art is so close to sports in some situations is probably related to the nature of sports. The definition of "sports" above put forward the idea of an activity pursued not just for the usual purposes, for example, running not simply to get places, but running for its own sake, running as well as we can.

This is similar to a common view of aesthetic value, which is seen as something over and above the strictly functional value coming from an object's normal use. So an aesthetically pleasing car is one which doesn't just get from A to B, but which impresses us with its grace, poise, and charisma.

In the same way, a sporting performance such as jumping doesn't just impress us as being an effective way to avoid obstacles or to get across streams. It impresses us because of the ability, skill, and style which is shown. Art and sports were probably more clearly linked at the time of Ancient Greece, when gymnastics and calisthenics
invoked admiration and aesthetic appreciation for the physical build, prowess and 'arete' displayed by participants. The modern term 'art' as skill, is related to this ancient Greek term 'arete'. The closeness of art and sport in these times was revealed by the nature of the Olympic Games which, as we have seen, were celebrations of both sporting and artistic achievements, poetry, sculpture and architecture.

**Technology**

Technology has an important role in sports, whether applied to an athlete's health, the athlete's technique, or equipment's characteristics.

**Equipment** As sports have grown more competitive, the need for better equipment has arisen. Golf clubs, football helmets, tennis racquets, baseball bats, soccer balls, hockey skates, and other equipment have all seen considerable changes when new technologies have been applied.

**Health** Ranging from nutrition to the treatment of injuries, as the knowledge of the human body has deepened over time, an athlete's potential has been increased. Athletes are now able to play to an older age, recover more quickly from injuries, and train more effectively than previous generations of athletes.

**Instruction** Advancing technology created new opportunities for research into sports. It is now possible to analyse aspects of sports that were previously out of the reach of comprehension. Being able to use motion capture to capture an athlete's movement, or advanced computer simulations to model physical scenarios has greatly increased an athlete's ability to understand what they are doing and how they can improve themselves.

**Terminology**

In British English, sporting activities are commonly denoted by the mass noun "sport". In American English, "sports" is more used. In all English dialects, "sports" is the term used for more than one specific sport. For example, "football and swimming are my favourite sports", would sound natural to all English speakers, whereas "I enjoy sport" would sound less natural than "I enjoy sports" to North Americans.
The term "sport" is sometimes extended to encompass all competitive activities, regardless of the level of physical activity. Both games of skill and motor sport exhibit many of the characteristics of physical sports, such as skill, sportsmanship, and at the highest levels, even professional sponsorship associated with physical sports. Air sports, billiards, bridge, chess, motorcycle racing, and powerboating are all recognized as sports by the International Olympic Committee with their world governing bodies represented in the Association of the IOC Recognised International Sports Federations.

**Spectator sport**

As well as being a form of recreation for the participants, much sport is played in front of an audience. Most professional sport is played in a 'theatre' of some kind; be it a stadium, arena, golf course, race track, or the open road, with provision for the (often paying) public.

Large television or radio audiences are also commonly attracted, with rival broadcasters bidding large amounts of money for the 'rights' to show certain fixtures. The football World Cup attracts a global television audience of hundreds of millions; the 2006 Final alone attracted an estimated worldwide audience of well over 700 million. In the United States, the championship game of the NFL, the Super Bowl, has become one of the most watched television broadcasts of the year. **Super Bowl Sunday** is a de facto national holiday in America; the viewership being so great that in 2007 advertising space was reported as being sold at $2.6m for a 30 second slot.
Nationalism and sport

Nationalism and sport are often intertwined, as sports provide a venue for symbolic competition between nations; sports competition often reflects national conflict, and in fact has often been a tool of diplomacy. The involvement of political goals in sport is seen by some as contrary to the fundamental ethos of sport being carried on for its own sake, for the enjoyment of its participants, but this involvement has been true throughout the history of sport.

Sports diplomacy

Sports Diplomacy is when sport is used as a political tool to enhance (or sometime worsen) diplomatic relations between two entities. The intention is sometimes to bring about radical change. While the Olympics is often the biggest political example of using sports for diplomatic means, cricket and association football, as well as other sports in the global arena, have also been used in this regard. In the case of Apartheid, sport was used to isolate South Africa and bring about a major overhaul in the country's social structure.

Olympics

Going as far back as the 1936 Olympics, Adolf Hitler used this as a stage to promote Aryan superiority for Germany with his ideological belief of racial supremacy. The Olympics were used as a method of hardening the German spirit and instilling unity among German youth. It was also believed that sport was a "way to weed out the weak, Jewish, and other undesirables." As a result, many Jews and Gypsies were banned from participating in sporting events. While Germany did top the medal table, the Nazi depiction of ethnic Africans as inferior was dispelled by Jesse Owens' gold medals in the 100m, 200m, 4x100m relay and long jump events.

Once again, in 1968, the global stage of the Olympics was used to show the world the plight of the African-American struggle during the civil rights movement in their home country. The famous Black Power salute was performed by Tommie Smith and John Carlos during the medal ceremony in Mexico City.
In 1972, the Israeli Olympic Team were massacred in an attack by Palestinian gunmen that started at the Olympic village and eventually resulted in the deaths of 17.

In 1980, the Soviet invasion of Afghanistan led to a boycott of the Moscow games by a large part of the Western powers and their allies in protest of Russian actions. In the 1984 Los Angeles Olympics the Soviet Bloc led a retaliatory boycott of the games in response to the American-led Moscow games boycott.

**Table tennis**

In the 1970s an exchange of table tennis players from the United States and the People's Republic of China led to a thaw in Sino-American relations that eventually led to U.S. President Richard Nixon's rapprochement with China.

**Cricket**

Cricket has also had a hand to play in sporting diplomacy. Following the Soviet invasion of Afghanistan, and Soviet pressure on India to deflect the tension they faced, in 1987 Pakistan's president at the time, General Zia ul-Haq, attended a test match between India and Pakistan in Jaipur - a visit that apparently helped cool a flare-up in tensions. Furthermore, following a fifteen year lull in test matches, cricket tours between India and Pakistan were revived in 2004 in the wake of diplomatic initiatives to bury half a century of mutual hostility. Both sides relaxed their tough visa regulations for each other, allowing thousands of fans to travel across the border.

In an attempt to replicate the cricket diplomacy of the past General Pervez Musharraf came to India in 2005 ostensibly for a cricket match. The trip, however, quickly took on the air of a summit as the sides were urged "to seize a historic chance to end their dispute over Kashmir." Often this rivalry has been tinged with a religious-political bent to it. A Pakistani fan in Karachi ran onto the pitch to attack the Indian captain, and fans threw stones at the Indian players during the match in Karachi. In 2000 right-wing Hindus dug up the cricket pitch in New Delhi to protest against the Pakistani team's visit.

China have also gotten in on the cricket diplomacy act. Cross-Strait relation have once again been the impetus for doing so. During the buildup to the 2007 World Cup,
Antigua received a $55 million grant to build the Sir Vivian Richards Stadium, while Jamaica received $30 million for a new Trelawny stadium. St. Lucia have also got both a cricket and a football stadium courtesy of China. China spent a remarkable $132 million on cricket facilities in the West Indies over the past few years, a massive amount compared to the International Cricket Council's paltry 10-year budget of $70 million to promote cricket globally. It is said that the motive for China's generosity is because "Most of the remaining countries that recognize Taiwan are located in the Caribbean and Latin America." The diplomacy paid off in the end as Grenada and Dominica derecognized Taiwan as an independent country. Further, "Of the remaining 24 countries that recognize Taiwan, four are in the Caribbean and two of these play cricket." Grenada previously had a stadium built by Taiwan, but saw it flattened by a hurricane. To join the action, China quickly came in to erect another stadium. Consequently, Taiwan took Grenada to a New York City court to force the latter to return the original loan.

Put on the back foot, a beleaguered Taiwan also used the World Cup to shore up its position among its shrinking West Indian support base. It doled out $21 million to St. Kitts and Nevis and $12 million to the even smaller St. Vincent and the Grenadines for cricket grounds. China's aggressive ambitions have benefited the Caribbean Islands as "Strategic analysts say China is laying out more money than is needed to just isolate Taiwan. China, which has built large embassies in each of the islands, now has a bigger diplomatic presence in the Caribbean than the United States, the superpower next door." And that "Mainland China's long-term strategy coincides with its foreign policy."

In 2008, the England and Wales Cricket Board cancelled Zimbabwe's 2009 tour of England and suspended all bilateral relations between the two states in response to the situation regarding the 2008 Zimbabwean presidential election.

Association football

The most infamous declaration of politics and sport was the Football War between El Salvador and Honduras. Though the build up to the war had to do with more socio-economic issues like immigration and land reform, the impetus for war was an inflammation of tensions set off by rioters during the second North American
qualifying round for the 1970 FIFA World Cup. Disturbances broke out during the first game in Tegucigalpa, but the second leg saw the situation get considerably worse in San Salvador. Honduran fans were roughed up, the Honduran flag and national anthem were insulted, and the emotions of both nations became considerably agitated. In retaliation, violence against Salvadoran residents in Honduras, including several Vice Consuls, increased. An unknown number of Salvadorans were killed or brutalized, and tens of thousands began fleeing the country. The press of both nations contributed to a growing climate of near-hysteria, and on June 27, 1969, twelve days after the second-leg game, Honduras broke diplomatic relations with El Salvador. On July 14, 1969, the Salvadoran army launched an attack against Honduras. The Organization of American States negotiated a cease-fire which took effect on July 20, with the Salvadoran troops withdrawn in early August.

Athletic Bilbao are famous for the cantera policy of signing only Basque players. Along with fellow Basque side Real Sociedad, Bilbao raised the still banned Basque flag in a game shortly after the death of General Francisco Franco.

In the 1986 Mexico World Cup, following the Falklands War between Argentina and the United Kingdom, Diego Maradona scored a goal via the "Hand of God" to fuel the flames between the two sides. To make matters worse, this was an unrecognized foul using the hand to score a goal.

At the 1998 FIFA World Cup, held in France, Iran recorded their first World Cup victory in the second game, beating the United States 2-1, with Estili and Mahdavikia scoring goals for Iran. The match was preheated with much excitement because of each country's political stance after the Iranian revolution. However, in an act of defiance against all forms of hatred or politics in sports, both sides presented one another with gifts and flowers and stood together for a picture before the match kickoff.

The 2004 AFC Asian Cup held in China made headlines due to events that took place during the final between China and Japan, apparently due to historical relations dating back to World War II (see Second Sino-Japanese War and Nanjing Massacre): As the Japanese national anthem was being played, the home fans expressed their anti-Japanese sentiment by drowning out the national anthem with their chants. The
Chinese home fans continually booed at the players and visiting fans as they watched Japan rout China 3-1. After the match, some Chinese fans rioted outside the Beijing Worker's Stadium.

The 2007 AFC Asian Cup was another facet of sporting politics. The victorious Iraqi team came out despite ethnic factionalism in their country and an invasion by the American military to win the biggest tournament in Asian football. Following a previous round win, Iraqi Military spokesman Brigadier General Qassim Moussawi said they wanted to stop "terrorists, Sunni extremists and criminals from targeting the joy of the people." There was controversy as the Iraqi captain said he "dared not return to his homeland because of the conditions created by the US occupation." President Jalal Talabani said it was disappointing they couldn't celebrate at home with the fans. Yet many hailed the victory as a show of unity. Iraq's Brazilian coach Jorvan Vieira signified they importance of the win, "This is not just about football... this is more important than that...This has brought great happiness to a whole country. This is not about a team, this is about human beings." Likewise, Saudi coach Helio Cesar dos Anjos chimed in that "Iraq deserved to win today...They were very motivated and we knew the whole world was supporting this team." Likewise, the American leadership also came out in praise.

Once again, on September 6, 2008, Armenia and Turkey faced each other in a 2010 FIFA World Cup qualification match in Yerevan. In an unprecedented step, Turkish president Abdullah Gul was invited to watch the match, where the presidents of Turkey and Armenia sat together, albeit behind bullet-proof glass. The Turkish national anthem was almost drowned out by booing from 35,000 Armenian fans, showing there is still a lot of mistrust between the two. However, the gesture "between the presidents showed that they believed 'football diplomacy' had achieved the most important result." This was a first for the two countries divided by the legacy of the 20th century's first genocide.

Apartheid

Most famously, the sporting boycott of South Africa during Apartheid was said to have played a crucial role in forcing South Africa to open up their society and to end a global isolation. South Africa was excluded from the 1964 Summer Olympics, and
many sports' governing bodies expelled or suspended membership of South African affiliates. It was said that the "international boycott of apartheid sport has been a powerful means for sensitising world opinion against apartheid and in mobilising millions of people for action against that despicable system." This boycott "in some cases helped change official policies."

The South African Table Tennis Board (SATTB), a body founded in contravention to the white South African table tennis board, was replaced for the latter by the International Table Tennis Federation. While the SATTB team was able to participate in the world championships held in Stockholm in 1957, team members were immediately refused passports by the government. It ruled that no black could compete internationally except through the white sports body.

Started in 1980, the United Nations "Register of Sports Contacts with South Africa" - a record of sports exchanges with South Africa and a list of sportsmen who have participated in sports events in South Africa - prove to be an effective instrument to discourage collaboration with apartheid sport. In the 1980s South Africa was also expelled from most international sports bodies. The International Olympic Committee even adopted a declaration against "apartheid in sport" on June 21, 1988, for the total isolation of apartheid sport.

The country's hosting and winning of the 1995 Rugby World Cup was a powerful boost to post-apartheid South Africa's return to the international sporting scene.

**Sports and politics in the United States**

Sports and politics in the United States somewhat go hand in hand. In America, when someone has a famous face their opinion about any topic is heard more, and people listen. Also the political figures like to try their hands in sports as well. Former President George W. Bush was once part owner of Major League Baseball team the Texas Rangers. He also rides mountain bikes throughout his Texas ranch. Political figures can often be seen attending sports activities. Journalists can also be found comparing sports to politics in particular articles. Sometimes sports relationship and political relationships spill off into the business sides of things.
Don King is a well known figure in the sports world. In 2004 what started off as a casual dinner turned into him fully supporting George W. Bush. Don King even donated $44,500 to the Republican Party cause. One particular distance runner Jim Ryun is a Republican congressman support the GOP as well. Athletes are known for their determination. Some sports figures take their determination into the political world whether it is the Democratic Party or the Republican Party.

There have been plenty of people to make the transition from sports to politics successfully. Former NBA guard Kevin Johnson is now the mayor of his hometown Sacramento, California. After graduating from the University of California Berkeley, with a bachelor’s degree in political science, he went on to play 13 years in the NBA. Kevin Johnson is just one of the many successful athletes to make this transition. Athletes such as Charles Barkley, Bill Bradley, Heath Shuler and Steve Largent are all great politicians. There are also ways in sports that politics are different.

Athletes gain a lot of attention at a young age and sports reporters sometimes are under pressure to find the next best thing. That kind of pressure makes them a priority, so eventually prep websites rank these young athletes. The older they get the more exposure and the harder it is for newcomers to make names for themselves. In the sports world, they call it politics if someone gets a lot of publicity and playing time because they are in the media all the time. When an athlete makes it to the pros based on hype their road is a lot easier than the ones that are not seen as much. Be that as it may, there are still people that play sports just for the fun of it.

**Nationalist sports**

In the history of Ireland, Gaelic sports were clearly carried on with nationalist overtones: for example, for most of the last century a person could have been banned from playing Gaelic football, hurling, or other sport, if the person was seen to have played soccer, cricket, rugby or any other game which was perceived to be of British origin. Furthermore, the Old Firm derby in Glasgow featuring Celtic, historically linked to the city's Catholic community, and Rangers, similarly linked to the city's Protestant community, have also historically seen trends along religio-political lines.
The nationalistic Italian fascists also created Volata as their own home-grown alternative to soccer and rugby. It was intended to be a replacement for the popular games perceived to be of British origin that would be of a more local character, tracing its heritage back to the earlier Italian games of Harpastum and Calcio Fiorentino. However, unlike its Gaelic equivalents, Volata was short-lived and is no longer played.

The policy of Spanish football team Athletic Bilbao of picking only Basque players is strongly linked to Basque nationalism.¹²
The **Olympic Games** are a major international event featuring summer and winter sports, in which thousands of athletes participate in a variety of competitions. The Games are currently held every two years in even-numbered years, with Summer and Winter Olympic Games alternating, although they occur every four years within their respective seasonal games. Originally, the ancient Olympic Games were held in Olympia, Greece, from the 8th century BC to the 5th century AD. Baron Pierre de Coubertin founded the International Olympic Committee (IOC) in 1894. The IOC has since become the governing body of the Olympic Movement, whose structure and actions are defined by the Olympic Charter.

The evolution of the Olympic Movement during the 20th century forced the IOC to adapt the Games to the world's changing social circumstances. Some of these adjustments included the creation of the Winter Games for ice and snow sports, the Paralympic Games for athletes with physical disabilities, and the Youth Olympic Games for teenage athletes. The IOC also had to accommodate the Games to the varying economical, political, and technological realities of the 20th century. As a result, the Olympics shifted away from pure amateurism, as envisioned by Coubertin, to allow participation of professional athletes. The growing importance of the mass media created the issue of corporate sponsorship and commercialization of the Games.

The Olympic Movement currently comprises international sports federations (IFs), National Olympic Committees (NOCs), and organizing committees for each specific Olympic Games. As the decision-making body, the IOC is responsible for choosing
the host city for each Olympic Games. The host city is responsible for organizing and funding a celebration of the Games consistent with the Olympic Charter. The Olympic program, consisting of the sports to be contested at each Olympic Games, is also determined by the IOC. The celebration of the Games encompasses many rituals and symbols, such as the Olympic flag and torch, as well as the opening and closing ceremonies. There are over 13,000 athletes that compete at the Summer and Winter Olympics in 33 different sports and nearly 400 events. The first, second, and third place finishers in each event receive gold, silver or bronze Olympic medals, respectively.

The Games have grown in scale to the point that nearly every nation is represented. Such growth has created numerous challenges, including boycotts, doping, bribery of officials, and terrorism. Every two years, the Olympics and its media exposure provide unknown athletes with the chance to attain national, and in particular cases, international fame. The Games also constitute a major opportunity for the host city and country to promote and showcase themselves to the world.

**Ancient Olympics**

The Ancient Olympic Games was a series of competitions held between representatives of several city-states from Ancient Greece, which featured mainly athletic but also combat and chariot racing events. The origin of these Olympics is shrouded in mystery and legend. One of the most popular myths identifies Heracles and his father Zeus as the progenitors of the Games. According to legend, it was Heracles who first called the Games "Olympic" and established the custom of holding them every four years. A legend persists that after Heracles completed his twelve labors, he built the Olympic stadium as an honor to Zeus. Following its completion, he walked in a straight line for 200 steps and called this distance a "stadion" (Greek: στάδιον, Latin: stadium, "stage"), which later became a unit of distance. Another myth associates the first Games with the ancient Greek concept of Olympic truce (ἐκεχειρία, ekecheiria). The most widely accepted date for the inception of the Ancient Olympics is 776 BC; this is based on inscriptions, found at Olympia, of the winners of a footrace held every four years starting in 776 BC. The Ancient Games featured running events, a pentathlon (consisting of a jumping event, discus and
javelin throws, a foot race and wrestling), boxing, wrestling, and equestrian events. Tradition has it that Coroebus, a cook from the city of Elis, was the first Olympic champion.

The Olympics were of fundamental religious importance, featuring sporting events alongside ritual sacrifices honoring both Zeus (whose famous statue by Phidias stood in his temple at Olympia) and Pelops, divine hero and mythical king of Olympia. Pelops was famous for his chariot race with King Oenomaus of Pisatis. The winners of the events were admired and immortalized in poems and statues. The Games were held every four years, and this period, known as an Olympiad, was used by Greeks as one of their units of time measurement. The Games were part of a cycle known as the Panhellenic Games, which included the Pythian Games, the Nemean Games, and the Isthmian Games.

The Olympic Games reached their zenith in the 6th and 5th centuries BC, but then gradually declined in importance as the Romans gained power and influence in Greece. There is no consensus on when the Games officially ended, the most common-held date is 393 AD, when the emperor Theodosius I declared that all pagan cults and practices be eliminated. Another date cited is 426 AD, when his successor Theodosius II ordered the destruction of all Greek temples. After the demise of the Olympics, they were not held again until the late 19th century.

**Modern Games**

**Forerunners**

The first significant attempt to emulate the ancient Olympic Games was the *L'Olympiade de la République*, a national Olympic festival held annually from 1796 to 1798 in Revolutionary France. The competition included several disciplines from the ancient Greek Olympics. The 1796 Games also marked the introduction of the metric system into sport.

In 1850 an Olympian Class, to improve the fitness of locals, was started by Dr William Penny Brookes at Much Wenlock, in Shropshire, England. In 1859, Dr Brookes renamed[19] the Olympian Class to Wenlock Olympian Games and this
annual games continues to this day. The Wenlock Olympian Society was founded by Dr Brookes on November 15, 1860.

**Revival**

Greek interest in reviving the Olympic Games began with the Greek War of Independence from the Ottoman Empire in 1821. It was first proposed by poet and newspaper editor Panagiotis Soutsos in his poem "Dialogue of the Dead", published in 1833. Evangelis Zappas, a wealthy Greek philanthropist, first wrote to King Otto of Greece, in 1856, offering to fund a permanent revival of the Olympic Games. Zappas sponsored the first Olympic Games in 1859, which was held in an Athens city square. Athletes participated from Greece and the Ottoman Empire. Zappas funded the restoration of the ancient Panathenaic stadium so that it could host all future Olympic Games.

Dr Brookes adopted events from the program of the Olympics held in Athens in 1859 into future Wenlock Olympian Games. In 1866, a national Olympic Games in Great Britain was organized by Dr. William Penny Brookes at London's Crystal Palace.

The Panathinaiko Stadium hosted Olympics in 1870 and 1875. Thirty thousand spectators crowded in to and around the stadium, in 1870, bigger than almost any crowd at Coubertin's IOC Olympics from 1900 to 1920.

In 1890, after attending the Olympian Games of the Wenlock Olympian Society Baron Pierre de Coubertin was inspired to found the International Olympic Committee. Coubertin built on the ideas and work of Brookes and Zappas with the aim of establishing an internationally rotating the Olympic Games that would occur every four years. He presented these ideas during the first Olympic Congress of the newly created International Olympic Committee (IOC). This meeting was held from June 16 to June 23, 1894, at the Sorbonne University in Paris. On the last day of the Congress, it was decided that the first Olympic Games, to come under the auspices of the IOC, would take place two years later in Athens. The IOC elected the Greek writer Demetrius Vikelas as its first president.

**1896 Games**
The first Games held under the auspices of the IOC was hosted in the Panathenaic stadium in Athens in 1896. These Games brought 14 nations and 241 athletes who competed in 43 events. Zappas and his cousin Konstantinos Zappas had left the Greek government a trust to fund future Olympic Games. This trust was used to help finance the 1896 Games. George Averoff contributed generously for the refurbishment of the stadium in preparation for the Games. The Greek government also provided funding, which was expected to be recouped through the future sale of tickets to the Games and from the sale of the first Olympic commemorative stamp set.

The Greek officials and public were enthusiastic about the experience of hosting these Games. This feeling was shared by many of the athletes, who even demanded that Athens be the host of the Olympic Games on a permanent basis. The IOC did not approve this request. The committee planned that the modern Olympics would rotate internationally. As such they decided to hold the second Games in Paris.

**Changes and adaptations**

Following the success of the 1896 Games, the Olympics entered a period of stagnation that threatened their survival. The Olympic Games held at the Paris Exposition in 1900 and the World's Fair at St. Louis in 1904 were side-shows. The Games at Paris did not have a stadium. The St. Louis Games hosted 650 athletes, but 580 were from the United States. The homogeneous nature of these celebrations was a low point for the Olympic Movement. The Games rebounded when the 1906 Intercalated Games (so-called because they were the second Games held within the third Olympiad) were held in Athens. These Games are not officially recognized by the IOC and no Intercalated Games have been held since. These Games, which were hosted at the Panathenaic stadium in Athens, attracted a broad international field of participants, and generated great public interest. This marked the beginning of a rise in both the popularity and the size of the Olympics.

The Winter Olympics were created to feature snow and ice sports that were logistically impossible to hold during the Summer Games. Figure skating (in 1908 and 1920) and ice hockey (in 1920) were featured as Olympic events at the Summer Olympics. The IOC desired to expand this list of sports to encompass other winter activities. At the 1921 Olympic Congress, in Lausanne, it was decided to hold a
winter version of the Olympic Games. A winter sports week (it was actually 11 days) was held in 1924 in Chamonix, France; this event became the first Winter Olympic Games. The IOC mandated that the Winter Games be celebrated every four years on the same year as their summer counterpart. This tradition was upheld until the 1992 Games in Albertville, France; after that, beginning with the 1994 Games, the Winter Olympics were held on the third year of each Olympiad.

Paralympics

In 1948, Sir Ludwig Guttman, determined to promote the rehabilitation of soldiers after World War II, organized a multi-sport event between several hospitals to coincide with the 1948 London Olympics. Guttman's event, known then as the Stoke Mandeville Games, became an annual sports festival. Over the next twelve years, Guttman and others continued their efforts to use sports as an avenue to healing. For the 1960 Olympic Games, in Rome, Guttman brought 400 athletes to compete in the "Parallel Olympics", which became known as the first Paralympics. Since then, the Paralympics have been held in every Olympic year. As of the 1988 Summer Olympics in Seoul, South Korea, the host city for the Olympics has also played host to the Paralympics.

Youth Games

Starting in 2010, the Olympic Games will be complemented by Youth Games, where athletes between the ages of 14 and 18 will compete. The Youth Olympic Games were conceived by IOC president Jacques Rogge in 2001 and approved during the 119th Congress of the IOC. The first Summer Youth Games will be in Singapore in 2010, while the inaugural Winter Games will be hosted in Innsbruck, Austria, two years later. These Games will be shorter than the senior Games; the summer version will last twelve days, while the winter version will last nine days. The IOC will allow 3,500 athletes and 875 officials to participate at the Summer Youth Games, and 970 athletes and 580 officials at the Winter Youth Games. The sports to be contested will coincide with those scheduled for the traditional senior Games, however there will be a reduced number of disciplines and events.

Recent games
From 241 participants representing 14 nations in 1896, the Games have grown to about 10,500 competitors from 204 countries at the 2008 Summer Olympics. The scope and scale of the Winter Olympics is smaller. For example, Turin hosted 2,508 athletes from 80 countries competing in 84 events, during the 2006 Winter Olympics. During the Games most athletes and officials are housed in the Olympic village. This village is intended to be a self-contained home for all the Olympic participants. It is furnished with cafeterias, health clinics, and locations for religious expression.

The IOC allows nations to compete that do not meet the strict requirements for political sovereignty that other international organizations demand. As a result, colonies and dependencies are permitted to set up their own National Olympic Committees. Examples of this include territories such as Puerto Rico, Bermuda, and Hong Kong, all of which compete as separate nations despite being legally a part of another country.

International Olympic Committee

The Olympic Movement encompasses a large number of national and international sporting organizations and federations, recognized media partners, as well as athletes, officials, judges, and every other person and institution that agrees to abide by the rules of the Olympic Charter. The umbrella organization of the Olympic Movement, the International Olympic Committee (IOC) is responsible for selecting the host city, overseeing the planning of the Olympic Games, updating and approving the sports program, and negotiating sponsorship and broadcasting rights. The Olympic Movement is made of three major elements:

- International Federations (IFs) are the governing bodies that supervise a sport at an international level. For example, the International Federation of Association Football (FIFA) is the IF for football (soccer), and the Fédération Internationale de Volleyball (FIVB) is the international governing body for volleyball. There are currently 35 IFs in the Olympic Movement, representing each of the Olympic sports.
- National Olympic Committees (NOCs) represent and regulate the Olympic Movement within each country. For example, the United States Olympic
Committee (USOC) is the NOC of the United States. There are currently 205 NOCs recognized by the IOC.

- Organizing Committees for the Olympic Games (OCOGs) constitute the temporary committees responsible for the organization of a specific celebration of the Olympics. OCOGs are dissolved after each Games, once the final report is delivered to the IOC.

French and English are the official languages of the Olympic Movement. The other language used at each Olympic Games is the language of the host country. Every proclamation (such as the announcement of each country during the parade of nations in the opening ceremony) is spoken in these three languages, or the main two depending on whether the host country is an English or French speaking country.

**Criticism**

The IOC has often been criticized for being an intractable organization, with several members on the committee for life. The leadership of IOC presidents Avery Brundage and Juan Antonio Samaranch was especially controversial. Brundage was president for over 20 years, and during his tenure he protected the Olympics from untoward political involvement. He was accused of both racism, for his handling of the apartheid issue with the South African delegation, and anti-Semitism. Under the Samaranch presidency, the office was accused of both nepotism and corruption. Samaranch's ties with the Franco regime in Spain were also a source of criticism.

In 1998, it was uncovered that several IOC members had taken bribes from members of the Salt Lake City bid committee for the hosting of the 2002 Winter Olympics, to ensure their votes were cast in favor of the American bid. The IOC pursued an investigation which led to the resignation of four members and expulsion of six others. The scandal set off further reforms that would change the way host cities are selected, to avoid similar cases in the future.

A BBC documentary entitled *Panorama: Buying the Games*, aired in August 2004, investigated the taking of bribes in the bidding process for the 2012 Summer Olympics. The documentary claimed it was possible to bribe IOC members into voting for a particular candidate city. After being narrowly defeated in their bid for
the 2012 Summer Games, Parisian Mayor Bertrand Delanoë specifically accused the British Prime Minister Tony Blair and the London Bid Committee (headed by former Olympic champion Sebastian Coe) of breaking the bid rules. He cited French President Jacques Chirac as a witness; Chirac gave guarded interviews regarding his involvement. The allegation was never fully explored. The Turin bid for the 2006 Winter Olympics was also shrouded in controversy. A prominent IOC member, Marc Hodler, strongly connected with the rival bid of Sion, Switzerland, alleged bribery of IOC officials by members of the Turin Organizing Committee. These accusations led to a wide-ranging investigation. The allegations also served to sour many IOC members against Sion's bid and potentially helped Turin to capture the host city nomination.

Commercialization

The IOC originally resisted funding by corporate sponsors. It was not until the retirement of IOC president Avery Brundage, in 1972, that the IOC began to explore the potential of the television medium and the lucrative advertising markets available to them. Under the leadership of Juan Antonio Samaranch the Games began to shift toward international sponsors who sought to link their products to the Olympic brand.

Budget

During the first half of the 20th century the IOC was run on a small budget. As president of the IOC from 1952 to 1972, Avery Brundage rejected all attempts to link the Olympics with commercial interest. Brundage believed the lobby of corporate interests would unduly impact the IOC's decision-making. Brundage's resistance to this revenue stream meant the IOC left organizing committees to negotiate their own sponsorship contracts and use the Olympic symbols. When Brundage retired the IOC had US$2 million in assets; eight years later the IOC coffers had swelled to US$45 million. This was primarily due to a shift in ideology toward expansion of the Games through corporate sponsorship and the sale of television rights. When Juan Antonio Samaranch was elected IOC president in 1980 his desire was to make the IOC financially independent.
The 1984 Summer Olympics became a watershed moment in Olympic history. The Los Angeles-based organizing committee, led by Peter Ueberroth, was able to generate a surplus of US$225 million, which was an unprecedented amount at that time. The organizing committee had been able to create such a surplus in part by selling exclusive sponsorship rights to select companies. The IOC sought to gain control of these sponsorship rights. Samaranch helped to establish The Olympic Program (TOP) in 1985, in order to create an Olympic brand. Membership in TOP was, and is, very exclusive and expensive. Fees cost US$50 million for a four year membership. Members of TOP received exclusive global advertising rights for their product category, and use of the Olympic symbol, the interlocking rings, in their publications and advertisements.

**Effect of television**

The 1936 Summer Olympics in Berlin were the first Games to be broadcast on television, though only to local audiences. The 1956 Winter Olympics were the first internationally televised Olympic Games, and the following Winter Games had their broadcasting rights sold for the first time to specialized television broadcasting networks—CBS paid US$394,000 for the American rights, and the European Broadcasting Union (EBU) allocated US$660,000. In the following decades the Olympics became one of the ideological fronts of the Cold War. Superpowers jockeyed for political supremacy, and the IOC wanted to take advantage of this heightened interest via the broadcast medium. The sale of broadcast rights enabled the IOC to increase the exposure of the Olympic Games, thereby generating more interest, which in turn created more appeal to advertisers who purchased advertising time on television. This cycle allowed the IOC to charge ever-increasing fees for those rights. For example, CBS paid US$375 million for the rights of the 1998 Nagano Games, while NBC spent US$3.5 billion for the broadcast rights of all the Olympic Games from 2000 to 2008.

Viewership increased exponentially from the 1960s until the end of the century. This began as a result of the beginning of the usage of satellite in 1964 and the introduction of color television in 1968. Worldwide audience estimates for the 1968 Mexico City Games was 600 million, whereas at the Los Angeles Games of 1984, the audience
numbers had increased to 900 million; that number swelled to 3.5 billion by the 1992
Summer Olympics in Barcelona. However, at the 2000 Summer Games in Sydney,
NBC drew the lowest ratings for any Summer or Winter Olympics since 1968. This
was attributed to two factors: one was the increased competition from cable channels,
the second was the internet, which was able to display results and video in real time.
Television companies were still relying on tape-delayed content, which was becoming
outdated in the information era. A drop in ratings meant that television studios had to
give away free advertising time. With such high costs charged to broadcast the
Games, the added pressure of the internet, and increased competition from cable, the
television lobby demanded concessions from the IOC to boost ratings. The IOC
responded by making a number of changes to the Olympic program. At the Summer
Games, the gymnastics competition was expanded from seven to nine nights, and a
Champions Gala was added to draw greater interest. The IOC also expanded the
swimming and diving programs, both popular sports with a broad base of television
viewers. Finally, the American television lobby was able to dictate when certain
events were held so that they could be broadcast live during prime time in the United
States. The result of these efforts was mixed: the ratings for the 2006 Winter Games,
held in Torino, Italy, were significantly lower than those for the 2002 Games, while
there was a sharp increase in viewership for the 2008 Summer Olympics, staged in
Beijing.

Controversy

The sale of the Olympic brand has been controversial. The argument is that the
Games have become indistinguishable from any other commercialized sporting
spectacle. Specific criticism was levelled at the IOC for market saturation during the
1996 Atlanta and 2000 Sydney Games. The cities were awash in corporations and
merchants attempting to sell Olympic-related wares. The IOC indicated that they
would address this to prevent spectacles of over-marketing at future Games. Another
criticism is that the Games are funded by host cities and national governments; the
IOC incurs none of the cost, yet controls all the rights and profits from the Olympic
symbols. The IOC also takes a percentage of all sponsorship and broadcast income.
certainty that they will earn back their investments.
Symbols

The Olympic Movement uses symbols to represent the ideals embodied in the Olympic Charter. The Olympic symbol, better known as the Olympic rings, consists of five intertwined rings and represents the unity of the five inhabited continents (considering North and South America as a single continent). The colored version of the rings—blue, yellow, black, green, and red—over a white field forms the Olympic flag. These colors were chosen because every nation had at least one of them on its national flag. The flag was adopted in 1914 but flown for the first time only at the 1920 Summer Olympics in Antwerp, Belgium. It has since been hoisted during each celebration of the Games.

The Olympic motto is *Citius, Altius, Fortius*, a Latin expression meaning "Faster, Higher, Stronger". Coubertin's ideals are further expressed in the Olympic creed:

The most important thing in the Olympic Games is not to win but to take part, just as the most important thing in life is not the triumph but the struggle. The essential thing is not to have conquered but to have fought well.

Months before each Games, the Olympic flame is lit in Olympia in a ceremony that reflects ancient Greek rituals. A female performer, acting as a priestess, ignites a torch by placing it inside a parabolic mirror which focuses the sun's rays; she then lights the torch of the first relay bearer, thus initiating the Olympic torch relay that will carry the flame to the host city's Olympic stadium, where it plays an important role in the opening ceremony. Though the flame has been an Olympic symbol since 1928, the torch relay was introduced at the 1936 Summer Games, as part of the German government's attempt to promote its National Socialist ideology.

The Olympic mascot, an animal or human figure representing the cultural heritage of the host country, was introduced in 1968. It has played an important part on the Games identity promotion since the 1980 Summer Olympics, when the Russian bear cub Misha reached international stardom. The mascots of the most recent Summer Olympics, in Beijing, were the Fuwa, five creatures that represent the five fengshui elements important in Chinese culture.
Ceremonies

As mandated by the Olympic Charter, various elements frame the opening ceremony of the Olympic Games. Most of these rituals were established at the 1920 Summer Olympics in Antwerp. The ceremony typically starts with the hoisting of the host country's flag and a performance of its national anthem. The host nation then presents artistic displays of music, singing, dance, and theater representative of its culture. The artistic presentations have grown in scale and complexity as successive hosts attempt to provide a ceremony that outlasts its predecessor's in terms of memorability. The opening ceremony of the Beijing Games reportedly cost $100 million, with much of the cost incurred in the artistic segment.

After the artistic portion of the ceremony, the athletes parade into the stadium grouped by nation. Greece is traditionally the first nation to enter in order to honor the origins of the Olympics. Nations then enter the stadium alphabetically according to the host country's chosen language, with the host country's athletes being the last to enter. During the 2004 Summer Olympics, which was hosted in Athens, Greece, half of the Greek athletes entered first, and half entered last. During the Speeches are given, formally opening the Games. Finally, the Olympic torch is brought into the stadium and passed on until it reaches the final torch carrier—often a well-known and successful Olympic athlete from the host nation—who lights the Olympic flame in the stadium's cauldron.

Closing

The closing ceremony of the Olympic Games takes place after all sporting events have concluded. Flag-bearers from each participating country enter the stadium, followed by the athletes who enter together, without any national distinction. Three national flags are hoisted while the corresponding national anthems are played: the flag of Greece, to honor the birthplace of the Olympic Games; the flag of the current host country, and the flag of the country hosting the next Summer or Winter Olympic Games. The president of the organizing committee and the IOC president make their closing speeches, the Games are officially closed, and the Olympic flame is extinguished. In what is known as the Antwerp Ceremony, the mayor of the city that organized the Games transfers a special Olympic flag to the president of the IOC, who
then passes it on to the mayor of the city hosting the next Olympic Games. After these compulsory elements, the next host nation briefly introduces itself with artistic displays of dance and theater representative of its culture.

**Medal presentation**

A medal ceremony is held after each Olympic event is concluded. The winner, second and third-place competitors or teams stand on top of a three-tiered rostrum to be awarded their respective medals. After the medals are given out by an IOC member, the national flags of the three medalists are raised while the national anthem of the gold medalist's country plays. Volunteering citizens of the host country also act as hosts during the medal ceremonies, as they aid the officials who present the medals and act as flag-bearers. For every Olympic event, the respective medal ceremony is held, at most, one day after the event's final. For the men's marathon, the competition is usually held early in the morning on the last day of Olympic competition and its medal ceremony is then held in the evening during the closing ceremony.

**Sports**

The Olympic Games program consists of 26 sports, 30 disciplines and nearly 300 events. For example, wrestling is a Summer Olympic sport, comprising two disciplines: Greco-Roman and Freestyle. It is further broken down into fourteen events for men and four events for women, each representing a different weight class. The Summer Olympics program includes 26 sports, while the Winter Olympics program features 15 sports. Athletics, swimming, fencing, and artistic gymnastics are the only summer sports that have never been absent from the Olympic program. Cross-country skiing, figure skating, ice hockey, Nordic combined, ski jumping, and speed skating have been featured at every Winter Olympics program since its inception in 1924. Current Olympic sports, like badminton, basketball, and volleyball, first appeared on the program as demonstration sports, and were later promoted to full Olympic sports. Some sports that were featured in earlier Games were later dropped from the program.

Olympic sports are governed by international sports federations (IFs) recognized by the IOC as the global supervisors of those sports. There are 35 federations represented
at the IOC. There are sports recognized by the IOC that are not included on the Olympic program. These sports are not considered Olympic sports, but they can be promoted to this status during a program revision that occurs in the first IOC session following a celebration of the Olympic Games. During such revisions, sports can be excluded or included in the program on the basis of a two-thirds majority vote of the members of the IOC. There are recognized sports that have never been on an Olympic program in any capacity, including chess and surfing.

In October and November 2004, the IOC established an Olympic Programme Commission, which was tasked with reviewing the sports on the Olympic program and all non-Olympic recognized sports. The goal was to apply a systematic approach to establishing the Olympic program for each celebration of the Games. The commission formulated seven criteria to judge whether a sport should be included on the Olympic program. These criteria are history and tradition of the sport, universality, popularity of the sport, image, athletes’ health, development of the International Federation that governs the sport, and costs of holding the sport. From this study five recognized sports emerged as candidates for inclusion at the 2012 Summer Olympics: golf, karate, rugby union, roller sports and squash. These sports were reviewed by the IOC Executive Board and then referred to the General Session in Singapore in July 2005. Of the five sports recommended for inclusion only two were selected as finalists: karate and squash. Neither sport attained the required two-thirds vote and consequently they were not promoted to the Olympic program. In October 2009 the IOC voted to instate golf and rugby union as Olympic sports for the 2016 and 2020 Summer Olympic Games.

The 114th IOC Session, in 2002, limited the Summer Games program to a maximum of 28 sports, 301 events, and 10,500 athletes. Three years later, at the 117th IOC Session, the first major program revision was performed, which resulted in the exclusion of baseball and softball from the official program of the 2012 London Games. Since there was no agreement in the promotion of two other sports, the 2012 program will feature just 26 sports. The 2016 and 2020 Games will return to the maximum of 28 sports given the addition of rugby and golf.

Amateurism and professionalism
The ethos of the aristocracy as exemplified in the English Independent school greatly influenced Pierre de Coubertin. The independent schools subscribed to the belief that sport formed an important part of education, an attitude summed up in the saying *mens sana in corpore sano*, a sound mind in a sound body. In this ethos, a gentleman was one who became an all-rounder, not the best at one specific thing. There was also a prevailing concept of fairness, in which practicing or training was considered tantamount to cheating. Those who practiced a sport professionally were considered to have an unfair advantage over those who practiced it merely as a hobby.

The exclusion of professionals caused several controversies throughout the history of the modern Olympics. The 1912 Olympic pentathlon and decathlon champion Jim Thorpe was stripped of his medals when it was discovered that he had played semi-professional baseball before the Olympics. His medals were restored by the IOC in 1983 on compassionate grounds. Swiss and Austrian skiers boycotted the 1936 Winter Olympics in support of their skiing teachers, who were not allowed to compete because they earned money with their sport and were thus considered professionals.

As class structure evolved through the 20th century, the definition of the amateur athlete as an aristocratic gentleman became outdated. The advent of the state-sponsored "full-time amateur athlete" of the Eastern Bloc countries further eroded the ideology of the pure amateur, as it put the self-financed amateurs of the Western countries at a disadvantage. Nevertheless, the IOC held to the traditional rules regarding amateurism. Beginning in the 1970s, amateurism requirements were gradually phased out of the Olympic Charter. Eventually the decisions on professional participation were left to the IFs. As of 2004, the only sport in which no professionals compete is boxing, although even this requires a definition of amateurism based on fight rules rather than on payment, as some boxers receive cash prizes from their National Olympic Committees. In men's football (soccer), only three players over the age of 23 are eligible to participate per team in the Olympic tournament. This is done in order to maintain a level of amateurism.

**Controversies**

**Boycotts**
The Olympic Council of Ireland boycotted the 1936 Berlin Games, because the IOC insisted its team be restricted to the Irish Free State rather than represent the entire island of Ireland.[113] There were two boycotts of the 1956 Melbourne Olympics: Netherlands, Spain, and Switzerland refused to attend because of the repression of the Hungarian uprising by the Soviet Union; Cambodia, Egypt, Iraq and Lebanon boycotted the Games because of the Suez Crisis.[114] In 1972 and 1976 a large number of African countries threatened the IOC with a boycott to force them to ban South Africa and Rhodesia, because of their segregationist regimes. New Zealand was also one of the African boycott targets, because its national rugby union team had toured apartheid-ruled South Africa. The IOC conceded in the first two cases, but refused to ban New Zealand on the grounds that rugby was not an Olympic sport. Fulfilling their threat, twenty African countries were joined by Guyana and Iraq in a Tanzania-led withdrawal from the Montreal Games, after a few of their athletes had already competed. Taiwan also decided to boycott these Games because the People’s Republic of China (PRC) exerted pressure on the Montreal organizing committee to keep the delegation from the Republic of China (ROC) from competing under that name. The ROC refused a proposed compromise that would have still allowed them to use the ROC flag and anthem as long as the name was changed. Taiwan did not participate again until 1984, when it returned under the name of Chinese Taipei and with a special flag and anthem.

In 1980 and 1984, the Cold War opponents boycotted each other’s Games. Sixty-five nations refused to compete at the Moscow Olympics in 1980 because of the Soviet invasion of Afghanistan. This boycott reduced the number of nations participating to 81, the lowest number since 1956. The Soviet Union and 14 of its Eastern Bloc partners (except Romania) countered by boycotting the Los Angeles Olympics of 1984, contending that they could not guarantee the safety of their athletes. Soviet officials defended their decision to withdraw from the Games by saying that "chauvinistic sentiments and an anti-Soviet hysteria are being whipped up in the United States". The boycotting nations of the Eastern Bloc staged their own alternate event, the Friendship Games, in July and August.

There had been growing calls for boycotts of Chinese goods and the 2008 Olympics in Beijing in protest of China's human rights record, and in response to the
disturbances in Tibet and ongoing conflict in Darfur. Ultimately, no nation supported a boycott.[123][124][125] In August 2008, the government of Georgia called for a boycott of the 2014 Winter Olympics, set to be held in Sochi, Russia, in response to Russia's participation in the 2008 South Ossetia war.[126] The International Olympic Committee responded to concerns about the status of the 2014 games by stating that it is "premature to make judgments about how events happening today might sit with an event taking place six years from now".

Politics

The Olympic Games have been used as a platform to promote political ideologies almost from its inception. Nazi Germany wished to portray the Nationalist Socialist Party as benevolent and peace-loving when they hosted the 1936 Games. The Games were also intended to show the superiority of the Aryan race; a goal that was not met due in part to the achievements of athletes such as Jesse Owens, who won four gold medals at this Olympics. The Soviet Union did not participate until the 1952 Summer Olympics in Helsinki. Instead, starting in 1928, the Soviets organized an international sports event called Spartakiads. Other communist countries organized Workers Olympics during the interwar period of the 1920s and 1930s. These events were held as an alternative to the Olympics, which were perceived as a capitalist and aristocratic event. It was not until the 1956 Summer Games that the Soviets emerged as a sporting superpower and, in doing so, took full advantage of the publicity that came with winning at the Olympics.

Individual athletes have also used the Olympic stage to promote their own political agenda. At the 1968 Summer Olympics, in Mexico City, two American track and field athletes, Tommie Smith and John Carlos, who finished first and third in the 200 meter sprint race, performed the Black Power salute on the victory stand. The second place finisher Peter Norman wore an Olympic Project for Human Rights badge in support of Smith and Carlos. In response to the protest, IOC President Avery Brundage told the United States Olympic Committee (USOC) to either send the two athletes home or withdraw the track and field team. The USOC opted for the former.
Currently, the government of Iran has taken steps to avoid any competition between its athletes and those from Israel. An Iranian judoka did not compete in a match against an Israeli during the 2004 Summer Olympics. Although he was officially disqualified for excessive weight, Arash Miresmaeli was awarded US$125,000 in prize money by the Iranian government, an amount paid to all Iranian gold medal winners. He was officially cleared of intentionally avoiding the bout, but his receipt of the prize money raised suspicion.

**Use of performance enhancing drugs**

In the early 20th century, many Olympic athletes began using drugs to improve their athletic abilities. For example, the winner of the marathon at the 1904 Games, Thomas J. Hicks, was given strychnine and brandy by his coach. The only Olympic death linked to doping occurred at the Rome Games of 1960. During the cycling road race, Danish cyclist Knud Enemark Jensen fell from his bicycle and later died. A coroner's inquiry found that he was under the influence of amphetamines. By the mid-1960s, sports federations were starting to ban the use of performance enhancing drugs; in 1967 the IOC followed suit.

The first Olympic athlete to test positive for the use of performance enhancing drugs was Hans-Gunnar Liljenwall, a Swedish pentathlete at the 1968 Summer Olympics, who lost his bronze medal for alcohol use. The most publicized doping-related disqualification was that of Canadian sprinter Ben Johnson, who won the 100 meter dash at the 1988 Seoul Olympics but tested positive for stanozolol. His gold medal was subsequently stripped and awarded to runner-up Carl Lewis, who himself had tested positive for banned substances prior to the Olympics.

In the late 1990s, the IOC took the initiative in a more organized battle against doping, by forming the World Anti-Doping Agency (WADA) in 1999. There was a sharp increase in positive drug tests at the 2000 Summer Olympics and 2002 Winter Olympics. Several medalists in weightlifting and cross-country skiing were disqualified because of doping offenses. During the 2006 Winter Olympics, only one athlete failed a drug test and had a medal revoked. The IOC-established drug testing regimen (now known as the Olympic Standard) has set the worldwide benchmark that other sporting federations around the world attempt to emulate. During the Beijing
games, 3,667 athletes were tested by the IOC under the auspices of the World Anti-Doping Agency. Both urine and blood tests were used to detect banned substances. Several athletes were barred from competition by their National Olympic Committees prior to the Games; only three athletes failed drug tests while in competition in Beijing.

Violence

The Olympics have not brought lasting peace to the world, even during celebrations of the Games. In fact, three Olympiads had to pass without a celebration of the Games because of war: the 1916 Games were cancelled because of World War I, and the summer and winter games of 1940 and 1944 were cancelled because of World War II. The South Ossetia War between Georgia and Russia erupted on the opening day of the 2008 Summer Olympics in Beijing. Both President Bush and Prime Minister Putin were attending the Olympics at that time and spoke together about the conflict at a luncheon hosted by Chinese President Hu Jintao. When Nino Salukvadze of Georgia won the bronze medal in the 10 meter air pistol competition, she stood on the medal podium with Natalia Paderina, a Russian shooter who had won the silver. In what became a much-publicized event from the Beijing Games, Salukvadze and Paderina embraced on the podium after the ceremony had ended.

Terrorism has also threatened the Olympic Games. In 1972, when the Summer Games were held in Munich, Bavaria, Germany, eleven members of the Israeli Olympic team were taken hostage by the terrorist group Black September in what is now known as the Munich massacre. The terrorists killed two of the athletes soon after they had taken them hostage and killed the other nine during a failed liberation attempt. A German police officer and 5 terrorists also perished. During the Summer Olympics in 1996 in Atlanta, a bomb was detonated at the Centennial Olympic Park, which killed 2 and injured 111 others. The bomb was set by Eric Robert Rudolph, an American domestic terrorist, who is currently serving a life sentence for the bombing.¹⁴⁶

Champions and medalists

The athletes or teams who place first, second, or third in each event receive medals. The winners receive gold medals, which were solid gold until 1912, then made of
gilded silver and now gold-plated silver. Every gold medal must contain at least six grams of pure gold. The runners-up receive silver medals and the third-place athletes are awarded bronze medals. In events contested by a single-elimination tournament (most notably boxing), third place might not be determined and both semifinal losers receive bronze medals. At the 1896 Olympics only the first two received a medal; silver for first and bronze for second. The current three-medal format was introduced at the 1904 Olympics.[148] From 1948 onward athletes placing fourth, fifth, and sixth have received certificates, which became officially known as victory diplomas; in 1984 victory diplomas for seventh- and eighth-place finishers were added. At the 2004 Summer Olympics in Athens, the gold, silver, and bronze medal winners were also given olive wreaths. The IOC does not keep statistics of medals won, but National Olympic Committees and the media record medal statistics as a measure of success.

**Host nations and cities**

The host city for an Olympic Games is usually chosen seven years ahead of their celebration. The process of selection is carried out in two phases that span a two-year period. The prospective host city applies to its country's Olympic Committee; if more than one city from the same country submits a proposal to its NOC, the national committee typically holds an internal selection, since only one city per NOC can be presented to the International Olympic Committee for consideration. Once the deadline for submission of proposals by the NOCs is reached, the first phase (Application) begins with the applicant cities asked to complete a questionnaire regarding several key criteria related to the organization of the Olympic Games. In this form, the applicants must give assurances that they will comply with the Olympic Charter and with any other regulations established by the IOC Executive Committee. The evaluation of the filled questionnaires by a specialized group provides the IOC with an overview of each applicant's project and their potential to host the Games. On the basis of this technical evaluation, the IOC Executive Board selects the applicants that will proceed to the candidature stage.
Once the candidate cities are selected, they must submit to the IOC a bigger and more detailed presentation of their project as part of a candidature file. Each city is thoroughly analyzed by an evaluation commission. This commission will also visit the candidate cities, interviewing local officials and inspecting prospective venue sites, and submit a report on its findings one month prior to the IOC's final decision. During the interview process the candidate city must also guarantee that it will be able to fund the Games. After the work of the evaluation commission, a list of candidates is presented to the General Session of the IOC, which is assembled in a country that must not have a candidate city in the running. The IOC members gathered in the Session have the final vote on the host city. Once elected, the host city bid committee (together with the NOC of the respective country) signs a Host City Contract with the IOC, officially becoming an Olympic host nation and host city.

By 2016, the Olympic Games will have been hosted by 44 cities in 23 countries, but by cities outside Europe and North America on only eight occasions. Since the 1988 Summer Olympics in Seoul, South Korea, the Olympics have been held in Asia or Oceania four times, a sharp increase compared to the previous 92 years of modern Olympic history. The 2016 Games in Rio de Janeiro will be the first for a South American country. No bids from countries in Africa have ever succeeded. The countries that sent the most athletes to the 2008 Summer Olympics are China with 639, the United States with 596, and Russia who brought 455 athletes.

The United States has hosted four Summer and four Winter Olympics, more than any other nation. Among Summer Olympics host nations, the United Kingdom has been the host of two Games, and will host its third Olympics in 2012 in London, making London the only city ever to host three times. Germany, Australia, France, and Greece are the other nations to have hosted the Summer Olympics twice.

Concerning the Winter Olympics, France has hosted three Games, while Switzerland, Austria, Norway, Japan, and Italy have hosted twice. The most recent Games were held in Vancouver, Canada's second Winter Olympics and third overall. The next Winter Games will be in Sochi, Russia in 2014, which will be the first time this nation has hosted.

**Ancient Olympic Games**
The **Olympic Games** (Ancient Greek: τὰ Ὀλυμπία - *ta Olympia*; Modern Greek: Ὀλυμπιακοὶ Αγώνες (Katharevousa), Ολυμπιακοί Αγώνες (Dimotiki) - *Olympiakoι Agones*) were a series of athletic competitions held for representatives of various city-states of Ancient Greece. The exact origins of the Games are shrouded in myth and legend but records indicate that they began in 776 BC in Olympia in Greece. They were celebrated until 393 AD when they were suppressed by Theodosius I in AD 393 as part of the campaign to impose Christianity as a state religion. The Games were usually held every four years, or *olympiad*, as the unit of time came to be known. During a celebration of the Games, an Olympic Truce was enacted so that athletes could travel from their countries to the Games in safety. The prizes for the victors were olive wreaths or crowns.

The Games became a political tool used by city-states to assert dominance over their rivals. Politicians would announce political alliances at the Games, and in times of war, priests would offer sacrifices to the gods for victory. The Games were also used to help spread Hellenistic culture throughout the Mediterranean. The Olympics also featured religious celebrations and artistic competitions. A great statue of Zeus, one of the seven wonders of the ancient world was erected in Olympia to preside over the Games. Sculptors and poets would congregate each olympiad to display their works of art to would-be patrons.

The ancient Olympics were rather different from the modern Games. There were fewer events, and only free men who spoke Greek could compete (although a woman, Bilistiche is also mentioned as a winner). As long as they met the entrance criteria, athletes from any country or city-state were allowed to participate. The Games were always held at Olympia rather than alternating to different locations as is the tradition with the modern Olympic Games. There is one major commonality between the ancient and modern Games, the victorious athletes are honored, feted, and praised. Their deeds were heralded and chronicled so that future generations could appreciate their accomplishments.

**Origins**
To the Greeks it was important to root the Olympic Games in mythology. During the time of the ancient Games their origins were attributed to the gods, and competing legends persisted as to who actually was responsible for the Games' genesis. These origin traditions and myths have become nearly impossible to untangle, yet a chronology and patterns have arisen that help people understand the story behind the Games. The earliest myths regarding the origin of the Games are recounted by the Greek historian, Pausanias. According to the story, the dactyl Herakles (not to be confused with the son of Zeus) and two of his brothers raced at Olympia. He crowned the victor with an olive wreath, which explains the traditional prize given to Olympic champions. The other Olympian gods (so named because they lived permanently on Mount Olympus), would also engage in wrestling, jumping and running contests. Another myth, this one occurring after the aforementioned myth, is attributed to Pindar. He claims the festival at Olympia involved Pelops, king of Olympia and eponymous hero of the Peloponnesus, and Herakles, the son of Zeus. The story goes that after completing his labors, Herakles established an athletic festival to honor his father. Pelops, using trickery, and the help of Poseidon, won a chariot race against a local king and claimed the king's daughter, Hippodamia as his prize. A final myth, also attributed to Pausanias is dated by the historian at 776 BC. For some reason the Games of previous millennia were discontinued and then revived by Lycurgus of Sparta, Iphitos of Elis, and Cleoisthenes of Pisa at the behest of the Oracle of Delphi who claimed that the people had strayed from the gods, which had caused a plague and constant war. Restoration of the Games would end the plague, usher in a time of peace, and signal a return to a more traditional lifestyle. The patterns that emerge from these myths are that the Greeks believed the Games had their roots in religion, that athletic competition was tied to worship of the gods, and the revival of the ancient Games was intended to bring peace, harmony and a return to the origins of Greek life. Since these myths were documented by historians like Pausanias, who lived during the reign of Marcus Aurelius in the 160's AD, it is likely that these stories are more fable than fact.

History

The games were held to be one of the two central rituals in Ancient Greece, the other being the much older religious festival, the Eleusinian Mysteries.
The games started in Olympia, Greece, in a sanctuary site for the Greek deities near the towns of Elis and Pisa (both in Elis on the peninsula of Peloponnesos). The first Games began as an annual foot race of young women in competition for the position of the priestess for the goddess, Hera and a second race was instituted for a consort for the priestess who would participate in the religious traditions at the temple.

The Heraea Games, the first recorded competition for women in the Olympic Stadium, were held as early as the sixth century BC. It originally consisted of foot races only, as did the competition for males. Some texts, including Pausanias's *Description of Greece*, c. AD 175, state that Hippodameia gathered a group known as the "Sixteen Women" and made them administrators of the Heraea Games, out of gratitude for her marriage to Pelops. Other texts related to the Elis and Pisa conflict indicate that the "Sixteen Women" were peacemakers from Pisa and Elis and, because of their political competence, became administrators of the Heraea Games.

Being the consort of Hera in Classical Greek mythology, Zeus was the father of the deities in the pantheon of that era. The Sanctuary of Zeus in Olympia housed a 13-metre-high statue in ivory and gold of Zeus that had been sculpted by Phidias circa 445 BC. This statue was one of the ancient Seven Wonders of the World. By the time of the Classical Greek culture, in the fifth and fourth centuries BC, the games were restricted to male participants.

The historian Ephorus, who lived in the fourth century BC, is believed to have established the use of Olympiads to count years. The Olympic Games were held at four-year intervals, and later, the Greek method of counting the years even referred to these Games, using the term *Olympiad* for the period between two Games. Previously, every Greek state used its own dating system, something that continued for local events, which led to confusion when trying to determine dates. For example, Diodorus states that there was a solar eclipse in the third year of the 113th Olympiad, which must be the eclipse of 316 BC. This gives a date of (mid-summer) 786 BC for the first year of the first Olympiad. Nevertheless, there is disagreement among scholars as to when the Games began.
The only competition held then was, according to the later Greek traveller Pausanias who wrote in 175 A.D., the *stadion* race, a race over about 190 metres, measured after the feet of Hercules. The word *stadium* is derived from this foot race.

The Greek tradition of athletic nudity was introduced in 720 BC, either by the Spartans or by the Megarian Orsippus, and this was adopted early in the Olympics as well.

Several groups fought over control of the sanctuary at Olympia, and hence the Games, for prestige and political advantage. Pausanias later writes that in 668 BC, Pheidon of Argos was commissioned by the town of Pisa to capture the sanctuary from the town of Elis, which he did and then personally controlled the Games for that year. The next year, Elis regained control.

The Olympic Games were part of the Panhellenic Games, four separate games held at two- or four-year intervals, but arranged so that there was at least one set of games every year. The Olympic Games were more important and more prestigious than the Pythian, Nemean, and Isthmian Games.

Finally, the Olympic Games were suppressed, either by Theodosius I in AD 393 or his grandson Theodosius II in AD 435, as part of the campaign to impose Christianity as a state religion. The site of Olympia remained until an earthquake destroyed it in the sixth century AD.

**Culture**

The ancient Olympics were as much a religious festival as an athletic event. The Games were held in honor of the Greek god Zeus. On the middle day of the Games 100 oxen would be sacrificed to Zeus. Over time Olympia, site of the Games, became a central spot for the worship of head of the Greek pantheon and a temple, built by the Greek architect Libon was erected on the mountaintop. The temple was one of the largest Doric temples in Greece. The sculptor Pheidias created a statue of the god made of gold and ivory. It stood 42 feet (13 m) tall. It was placed on a throne in the temple. The statue became one of the seven wonders of the ancient world. As the historian Strabo put it,
"...the glory of the temple persisted...on account both of the festal assembly and of the Olympian Games, in which the prize was a crown and which were regarded as sacred, the greatest games in the world. The temple was adorned by its numerous offerings, which were dedicated there from all parts of Greece."

Artistic expression was a major part of the Games. Sculptors, poets and other artisans would come to the Games to display their works in what became an artistic competition. Sculptors created works like Myron's *Diskobolos* or *Discus Thrower*. Their aim was to highlight natural human movement and the shape of muscles and the body. Poets would be commissioned to write prose in honor of the Olympic victors. These poems, known as *Epinicians*, were passed on from generation to generation and many of them have lasted far longer than any other honor made for the same purpose.

Baron Pierre de Coubertin, one of the founders of the modern Olympic Games, wanted to fully imitate the ancient Olympics in every way. Included in his vision was to feature an artistic competition modeled on the ancient Olympics and held every four years, during the celebration of the Olympic Games. His desire came to fruition at the Olympics held in London in 1908.

**Politics**

Power in ancient Greece became centered around the city-state in the 8th century BC. The city-state was a population center that became organized into a self-contained political entity. These city-states often lived in close proximity to each other, which created competition for limited resources. Though conflict between the city-states was ubiquitous, it was also in their self-interest to engage in trade, military alliances and cultural interaction. The city-states had a dichotomous relationship with each other, on one hand they relied on their neighbors for political and military alliances, on the other they competed fiercely with those same neighbors for the resources necessary to sustain life. The Olympic Games were established in this political context. Representatives of the city-states would compete against each other at the Games.

In the first two centuries of the Games' existence Olympia had only regional religious importance. Greeks beyond the area immediately around the mountain did not compete in these early Games. This is evidenced by the dominance of Peloponnesian athletes in the victors' rolls. The spread of Greek colonies in the 5th and 6th century
BC is repeatedly linked to successful Olympic athletes. For example, Pausanias recounts that Cyrene was founded c. 630 BC by settlers from Thera with Spartan support. The support Sparta gave was primarily the loan of three-time Olympic champion Chionis. The draw of settling with an Olympic champion helped to populate the colonies and maintain cultural and political ties with the city-states in proximity to Olympia. Thus Hellenistic culture and the Games spread while the primacy of Olympia persisted.

The Games faced a serious challenge during the Peloponnesian War, which primarily pitted Athens against Sparta, but in reality touched nearly every Hellenistic city-state. The Olympics were used during this time to announce alliances and offer sacrifices to the gods for victory.

During the Olympic Games, a truce, or *ekecheiria* was observed. Three runners, known as *spondophoroi* were sent from Elis to the participant cities at each set of games to announce the beginning of the truce. During this period, armies were forbidden from entering Olympia, wars were suspended, and legal disputes and the use of the death penalty were forbidden. The truce was primarily designed to allow athletes and visitors to travel safely to the Games and was, for the most part, observed. Thucydides wrote of a situation when the Spartans were forbidden from attending the Games, and the violators of the truce were fined 2,000 minae for assaulting the city of Lepreum during the period of the *ekecheiria*. The Spartans disputed the fine and claimed that the truce had not yet taken hold.

While a marshal truce was observed by all participating city-states, no such reprieve from conflict existed in the political arena. The Olympic Games evolved the most influential athletic and cultural stage in ancient Greece, and arguably in the ancient world. As such the Games became a vehicle for city-states to promote themselves. The result was political intrigue and controversy. For example, Pausanias, a Greek historian, explains the situation of the athlete Sotades,

"Sotades at the ninety-ninth Festival was victorious in the long race and proclaimed a Cretan, as in fact he was. But at the next Festival he made himself an Ephesian, being bribed to do so by the Ephesian people. For this act he was banished by the Cretans."
This situation repeated itself at the 2008 Summer Olympics in Beijing. In what is becoming a growing trend, many athletes are switching citizenships in order to compete at the Games. There are an equal number of countries willing to grant citizenship and monetary considerations to these athletes in exchange for their representation and the honor that comes with potential Olympic success. In this the Olympics have changed very little from their roots in antiquity.[32]

Events

Only free men who spoke Greek were allowed to participate in the Ancient Games of classical times. They were to some extent "international", though, in the sense that they included athletes from the various Greek city-states. Additionally, participants eventually came from Greek colonies as well, extending the range of the games to far shores of the Mediterranean and of the Black Sea.

To be in the Games, the athletes had to qualify and have their names written in the lists. It seems that only young people were allowed to participate, as the Greek writer Plutarch relates that one young man was rejected for seeming overmature, and only after his lover interceded with the King of Sparta, who presumably vouched for his youth, was he permitted to participate. Before being able to participate, every participant had to take an oath in front of the statue of Zeus, saying that he had been in training for ten months.

At first, the Olympic Games lasted only one day, but eventually grew to five days. The Olympic Games originally contained one event: the stadion (or "stade") race, a short sprint measuring between 180 and 240 metres, or the length of the stadium. The length of the race is uncertain, since tracks found at archeological sites, as well as literary evidence, provide conflicting measurements. Runners had to pass five stakes that divided the lanes: one stake at the start, another at the finish, and three stakes in between.

The diaulos, or two-stade race, was introduced in 724 BC, during the 14th Olympic games. The race was a single lap of the stadium, approximately 400 metres, and scholars debate whether or not the runners had individual "turning" posts for the
return leg of the race, or whether all the runners approached a common post, turned, and then raced back to the starting line.

A third foot race, the *dolichos*, was introduced in 720 BC. Accounts of the race present conflicting evidence as to the length of the *dolichos*; however, the length of the race was 18-24 laps, or about three miles (5 km). The event was run similarly to modern marathons—the runners would begin and end their event in the stadium proper, but the race course would wind its way through the Olympic grounds. The course often would flank important shrines and statues in the sanctuary, passing by the Nike statue by the temple of Zeus before returning to the stadium.

The last running event added to the Olympic program was the *hoplitodromos*, or "Hoplite race", introduced in 520 BC and traditionally run as the last race of the Olympic Games. The runners would run either a single or double *diaulos* (approximately 400 or 800 yards) in full or partial armour, carrying a shield and additionally equipped either with greaves or a helmet. As the armour weighed between 50 and 60 lb (27 kg), the *hoplitodromos* emulated the speed and stamina needed for warfare. Due to the weight of the armour, it was easy for runners to drop their shields or trip over fallen competitors. In a vase painting depicting the event, some runners are shown leaping over fallen shields. The course they used for these runs were made out of clay, with sand over the clay.

Over the years, more events were added: boxing (*pygmel/pygmachia*), wrestling (*pale*), a very bloody *pankration* (regulated full-contact fighting, similar to today's mixed martial arts), chariot racing, and several other running events (the *diaulos, Hippios, dolichos*, and *hoplitodromos*), as well as a pentathlon, consisting of wrestling, *stadion*, long jump, javelin throw, and discus throw (the latter three were not separate events).

Boxing became increasingly brutal over the centuries. Initially, soft leather covered their fingers, but eventually, hard leather weighted with metal sometimes was used. The fights had no rest periods and no rules against hitting a man while he was down. Bouts continued until one man either surrendered or died—however, killing an opponent wasn't a good thing, as the dead boxer was automatically declared the winner.
In the chariot racing event, it was not the rider, but the owner of the chariot and team who was considered to be the competitor, so one owner could win more than one of the top spots. The addition of events meant the festival grew from one day to five days, three of which were used for competition. The other two days were dedicated to religious rituals. On the final day, there was a banquet for all the participants, consisting of 100 oxen that had been sacrificed to Zeus on the first day.

The winner of an Olympic event was awarded an olive branch and often was received with much honour throughout Greece, especially in his home town, where he was often granted large sums of money (in Athens, 500 drachma, a small fortune) and prizes including vats of olive oil. (See Milo of Croton.) Sculptors would create statues of Olympic victors, and poets would sing odes in their praise for money.

Archaeologists believe that wars were halted between the city-states of Greece so that the athletes as well as the spectators of the Olympics could get there safely. However, some archaeologists argue that the wars were not halted, but that the athletes who were in the army were allowed to leave and participate in the Olympics.

Participation in the classical games was limited to male athletes except for women who were allowed to take part by entering horses in the equestrian events. In 396 BC, and again in 392 BC, the horses of a Spartan princess named Cynisca won her the four-horse race. It is thought that single women (not betrothed or married) were allowed to watch the races. Also priestesses in the temple of Zeus who lit the candles were permitted.

The athletes usually competed naked, not only as the weather was appropriate, but also as the festival was meant to celebrate, in part, the achievements of the human body. Olive oil was occasionally used by the competitors, not only to keep skin smooth, but also to provide an appealing look for the participants.

**Famous athletes**

- from Athens:
  - Aurelios Zopyros (junior boxing)
- from Sparta:
Acanthus of Sparta (running: diaulos)

Chionis of Sparta (running: stadion, diaulos, long and triple jump)

Cynisca of Sparta (first woman to be listed as an Olympic victor)

- from Rhodes:
  - Diagoras of Rhodes (boxing 79th Olympiad, 464 BC) and his sons Akusilaos and Damagetos (boxing and pankration)
  - Leonidas of Rhodes (running: stadion, diaulos and hoplitodromos)

- from Croton:
  - Astylos of Croton (running: stadion, diaulos and hoplitodromos)
  - Milo of Croton (wrestling)
  - Timasitheos of Croton (wrestling)

- from other cities:
  - Koroibos of Elis (stadion, the very first Olympic champion)
  - Orsippus of Megara (running: diaulos)
  - Theagenes of Thasos (pankration)

- non-Greek:
  - Tiberius (steerer of a four-horse chariot)
  - Nero (steerer of a ten-horse chariot)
  - Varastades, Prince and future King of Armenia, last known Ancient Olympic victor (boxing) during the 291st Olympic Games in the fourth century

**Festivals in other places**

Athletic festivals under the name of "Olympic games", named in imitation of the original festival at Olympia, were established over time in various places all over the Greek world. Some of these are only known to us by inscriptions and coins; but others, as the Olympic festival at Antioch, obtained great celebrity. After these Olympic festivals had been established in several places, the great Olympic festival itself was sometimes designated in inscriptions by the addition of Pisa.

**Sport psychology**
**Sport psychology** (or **sports psychology**) is the study of a person's behavior in sport. It is also a specialization within the brain psychology and kinesiology that seeks to understand psychological/mental factors that affect performance in sports, physical activity, and exercise and apply these to enhance individual and team performance. It deals with increasing performance by managing emotions and minimizing the psychological effects of injury and poor performance. Some of the most important skills taught are goal setting, relaxation, visualization, self-talk, awareness and control, concentration, confidence, using rituals, attribution training, and periodization.
The history of sport psychology

The first sport psychologist is said to have been Norman Triplett, a North American man from Asia, born in 1861. Triplett’s first finding as a sport psychologist was that cyclists cycle faster in pairs or a group, rather than riding solo.

Carl Diem, a German, founded the world’s first sport psychology laboratory in 1920. Five years later, A.Z. Puni opened a lab at the Institute of Physical Culture in Leningrad. Also in 1925, Coleman Griffith opened the first sport psychology lab in North America at the University of Illinois. He began his research in factors that affect sport performance in 1918, and in 1923, offered the first ever sport psychology course.

The International Society of Sport Psychology (ISSP) was formed by Dr. Ferruccio Antonelli of Italy in 1965. In 1966, a group of sport psychologists met in Chicago to form the North American Society of Sport Psychology and Physical Activity (NASPSPA).

In the 1970's, sport psychology became a part of the curriculum on university campuses. These courses which were generally found in the kinesiology programs taught students how to develop positive attitudes in athletes using sport psychology and drugs. In the 1980's, sport psychology became more research focused. Sport psychologists looked into performance enhancement, the psychological impact of exercise and over training as well as stress management.

Today, sport and exercise psychologists have begun to research and provide information in the ways that psychological well-being and vigorous physical activity are related. This idea of psychophysiology, monitoring brain activity during exercise has aided in this research. Also, sport psychologists are beginning to consider exercise to be a therapeutic addition to healthy mental adjustment.

Just recently have sport psychologists begun to be recognized for the valuable contributions they make in assisting athletes and their coaches in improving performance during competitive situations, as well as understanding how physical exercise may contribute to the psychological well-being of non-athletes. Many can
benefit from sport psychologists: athletes who are trying to improve their performance, injured athletes who are looking for motivation, individuals looking to overcome the pressure of competition, and young children involved in youth sports as well as their parents. Special focus is geared towards psychological assessment of athletes. Assessment can be both, focused on selection of athletes and the team set up of rosters as well as on professional guidance and counseling of single athletes.

**Sport psychology terminology**

A few terms used in sport psychology:

- **Cohesion** – Group cohesion refers to the extent to which a team or group shares a sense of shared task or social bond
- **Imagery** – Refers to 'imagined' sensations, for example visual imagery is known as 'visualization'
- **Attention Focus** – Being able to block everything out, e.g., a crowd.
- **Motivation** – Recent research implies that sports-related achievement motivation is composed of several traits that together form a general orientation of a person towards achievement in sports. This research refers to The Achievement Motivation Inventory (AMI) (Schuler, Thornton, Frintrup & Mueller-Hanson, 2003) which is a broad-spectrum assessment of achievement-motivation in business, and has been used to develop the Sports Performance Indicator.
- **Internal Monologue** - Maintaining positive thoughts during competition by keeping a running conversation going in one's mind
- **Criticism** - A tenet of motivational theory that is necessary to improve performance. The proper delivery of that criticism is imperative, as criticism can either better performance or drastically worsen it. There are three types of criticism: Destructive, Self, and Constructive. The best method of delivering constructive criticism is the "sandwich" approach; here, one first offers a compliment, then offers and critical feedback and useful directions to improve in that particular area, and then end with another compliment.

**Exercise physiology**
**Exercise physiology** is the study of the function of the human body during various acute and chronic exercise conditions. These effects are significant during both short, high-intensity exercise, as well as with prolonged strenuous exercise such as done in endurance sports like marathons, ultramarathons, and road bicycle racing.

In exercise, the liver generates extra glucose, while increased cardiovascular activity by the heart, and respiration by the lungs, provides an increased supply of oxygen. When exercise is very prolonged and strenuous, a decline, however, can occur in blood levels of glucose. In some individuals, this might even cause hypoglycemia and hypoxemia. There can also be cognitive and physical impairments due to dehydration. Another risk is low plasma sodium blood levels.

Prolonged exercise is made possible by the human thermoregulation capacity to remove exercise waste heat by sweat evaporation. This capacity evolved to enable early humans after many hours of persistence hunting to exhaust game animals that cannot remove so effectively exercise heat from their body.

**Energy**

Humans have a high capacity to expend energy for many hours doing sustained exercise. For example, one individual cycling at a speed of 26.4 km/h (16.4 mph) across 8,204 km (5,098 mi) on 50 consecutive days expended a total of 1,145 MJ (273,850 kcal) with an average power output of 182.5 W.

Skeletal muscle burns 90 mg (0.5 mmol) of glucose each minute in continuous activity (such as when repetitively extending the human knee), generating ≈24 W of mechanical energy, and since muscle energy conversion is only 22-26% efficient, ≈76 W of heat energy. Resting skeletal muscle has a basal metabolic rate (resting energy consumption) of 0.63 W/kg making a 160 fold difference between the energy consumption of inactive and active muscles. For short muscular exertion, energy expenditure can be far greater: an adult human male when jumping up from a squat mechanically generates 314 W/kg, and such rapid movement can generate twice this power in nonhuman animals such as bonobos, and in some small lizards.
This energy expenditure is very large compared to the resting metabolism basal metabolic rate of the adult human body. This varies somewhat with size, gender and age but is typically between 45 W and 85 W. Total energy expenditure (TEE) due to muscular expended energy is very much higher and depends upon the average level of physical work and exercise done during a day. Thus exercise, particularly if sustained for very long periods, dominates the energy metabolism of the body.

**Metabolic changes**

**Early**

ATP recycled from ADP in mitochondria provides the energy needed for muscle contraction. The quickest generation of ATP comes from the splitting of already existing phosphocreatine (PCr). This is then followed by the anaerobic (without oxygen) breakdown of the muscle’s stores of glycogen to produce lactic acid. This anaerobic metabolism quickly generates large amounts of ATP energy but is limited to providing energy for short exertion spurts. A rapid switch occurs to aerobic ATP energy generation: by 75 seconds, anaerobic metabolism reduces to producing only half of a muscle’s ATP.

**Plasma glucose**

Initial aerobic energy substrates are plasma carried free fatty acids and lactate. However, plasma glucose also increasingly comes to be generated by the liver for muscle consumption.

In adults, active physical exertion by skeletal muscle extracts plasma glucose (after muscle glycogen stores are depleted) in a glucose concentration dependent manner. This extraction of plasma glucose can be considerable, for instance, the muscle working repetitive knee extending draws 0.5 mmol kg\(^{-1}\) min\(^{-1}\). Hepatic (liver) output of glucose can increase to compensate in adults fivefold to make up for this exercise depletion. This extra glucose usually results in a higher level of plasma glucose than at rest. However, this increase can be insufficient in intense exercise to keep up with prolonged glucose utilization from plasma (replacing only a third to two thirds). As a result, strenuous prolonged exercise can dramatically reduce plasma glucose levels:
for example, before starting ergometer cycling, this can be 4.3 mmol L\(^{-1}\), but after 3 hours, 2.5 mmol L\(^{-1}\). That this is due to a limited capacity to replace glucose is demonstrated by the fact that there is no drop if cyclists take a glucose polymer supplement every 20 minutes.

Physical exercise in one part of the body can also compete with another, for example, the glucose extracted from plasma by knees doing extensions drops by 20% when arm cranking is added. (Heart muscle, it should be noted, while able to use glucose, normally uses free fatty acids, as does skeletal muscle at rest.)

**Oxygen**

Increased cardiac output and pulmonary activity occur during exercise to meet the metabolic needs of muscles (this is measured by VO\(_2\) max). Also, like with the plasma levels of glucose, these initially increase but with prolonged strenuous exercise can decrease below resting blood levels.

**Dehydration**

Intense prolonged exercise produces metabolic waste heat, and this is removed by sweat based thermoregulation. A male marathon runner, loses each hour around 0.83 L in cool weather, and 1.2 L in warm (losses in females are about 68 to 73% lower). People doing heavy exercise may lose two and half times as much fluid in sweat as urine. This can have profound physiological effects. Cycling for 2 hours in the heat (35 °C) with minimal fluid intake causes body mass declined by 3 to 5%, blood volume by 3 to 6%, body temperature to rise constantly, and compared to those with proper fluid intake, they have higher heart rates, lower stroke volumes and cardiac outputs, reduced skin blood flow, and higher systemic vascular resistance. These effects are largely eliminated by replacing 50 to 80% of the fluid lost in sweat.

**Other**

- Plasma catecholamine concentrations increase 10 fold in whole body exercise.
• Ammonia is produced by exercised skeletal muscles from ADP (the precursor of ATP) by purine nucleotide deamination and amino acid catabolism of myofibrils.[24]
• interleukin-6 (IL-6) increases in blood circulation due to its release from working skeletal muscles. This release is reduced if glucose is taken, suggesting it links to energy related stresses.
• Sodium absorption is affected by the release of interleukin-6 as this can cause the secretion of arginine vasopressin which, in turn, can led to exercise-associated hyponatremia (dangerously low sodium levels). This loss of sodium in blood plasma can result in encephalopathy (caused by swelling of the brain). This can be prevented by awareness of the risk of drinking excessive amounts of fluids during prolonged exercise.

**Brain**

At rest, the human brain receives 15% of total cardiac output, and uses 20% of the body's energy consumption. The brain is normally dependent for its high energy expenditure upon aerobic metabolism. The brain as a result is highly sensitive to failure of its oxygen supply with loss of consciousness occurring within six to seven seconds, with its EEG going flat in 23 seconds. The metabolic demands of exercise if it effected the oxygen and glucose supply to the brain could therefore quickly disrupt its functioning.

Protecting the brain from even minor disruption is important since exercise depends upon motor control, and particularly, because humans are bipeds, the motor control needed for keeping balance. Indeed, for this reason, brain energy consumption is increased during intense physical exercise due to the demands in the motor cognition needed to control the body.

**Cerebral oxygen**

Cerebral autoregulation usually ensures the brain has priority to cardiac output, though this is impaired slightly by exhaustive exercise. During submaximal exercise, cardiac output increases and cerebral blood flow increases beyond the brain’s oxygen needs. However, this is not the case for continuous maximal exertion: “Maximal
exercise is, despite the increase in capillary oxygenation [in the brain], associated with a reduced mitochondrial O\textsubscript{2} content during whole body exercise.” The autoregulation of the brain’s blood supply is impaired particularly in warm environments.

**Glucose**

In adults, exercise depletes the plasma glucose available to the brain: short intense exercise (35 min ergometer cycling) can reduce brain glucose uptake by 32%.

At rest, energy for the adult brain is normally provided by glucose but the brain has a compensatory capacity to replace some of this with lactate. Research suggests that this can be raised, when a person rests in a brain scanner, to about 17%, with a higher percentage of 25% occurring during hypoglycemia. In intense exercise, lactate has been estimated to provide a third of the brain’s energy needs. There is evidence that the brain might, however, in spite of these alternative sources of energy, still suffer an energy crisis since IL-6 (a sign of metabolic stress) is released during exercise from the brain.

**Hyperthermia**

Humans use sweat thermoregulation for body heat clearance, particularly to remove the heat produced during exercise. Mild dehydration as a consequence of exercise and heat is reported to impair cognition. These impairments can start after body mass lost that is greater than 1%. Cognitive impairment, particularly due to heat and exercise is likely to be due to loss of integrity to the blood brain barrier. Hyperthermia also can lower cerebral blood flow, and raise brain temperature.

**Ammonia**

Exercised skeletal muscles produces ammonia. This ammonia is taken up by the brain in proportion to its arterial concentration. Since perceived effort links to such ammonia accumulation, this could be a factor in the sensation of fatigue.

**Combinational exacerbation**
These metabolic consequences of exercise can exacerbate each other’s negative neurological effects. For example, the uptake of ammonia by the brain is greater with glucose depletion (CSF ammonia levels: rest, below 2 \( \mu \text{mol min}^{-1} \) detection level; following 3 hours exercise with glucose supplementation, 5.3 \( \mu \text{mol min}^{-1} \), without glucose supplementation, 16.1 \( \mu \text{mol min}^{-1} \)). The effects of dehydration are greater and happen at a lower threshold in hot environments.

**Fatigue**

**Intense activity**

Researchers once attributed fatigue to a build-up of lactic acid in muscles. However, this is no longer believed. Indeed, lactate may stop muscle fatigue by keeping muscles fully responding to nerve signals. Instead, providing available oxygen and energy supply, disturbances of muscle ion homeostasis are the main factor determining exercise performance, at least during brief very intense exercise.

Each muscle contraction involves an action potential that activates voltage sensors, and so releases Ca\(^{2+}\) ions from the muscle fibre’s sarcoplasmic reticulum. The action potentials causing this require also ion changes: Na influxes during the depolarization phase and K effluxes for the repolarization phase. Cl\(^{-}\) ions also diffuse into the sarcoplasm to aid the repolarization phase. During intense muscle contraction the ion pumps that maintain homeostasis of these ions are inactivated and this (with other ion related disruption) causes ionic disturbances. This causes cellular membrane depolarization, inexcitability, and so muscle weakness. Ca\(^{2+}\) leakage from type 1 ryanodine receptor) channels has also been identified with fatigue.

**Endurance failure**

After intense prolonged exercise, there can be a collapse in body homeostasis. Some famous examples include:

- Dorando Pietri in the 1908 Summer Olympic men’s marathon ran the wrong way and collapsed several times.
- Jim Peters in the marathon of the 1954 Commonwealth Games staggered and collapsed several times, and though he had a five-kilometre (three-mile) lead,
failed to finish. Though it was formerly believed that this was due to severe dehydration, more recent research suggests it was the combined effects upon the brain of hyperthermia, hypertonic hypernatraemia associated with dehydration, and possibly hypoglycaemia.

- Gabriela Andersen-Schiess in the woman’s marathon at the Los Angeles 1984 Summer Olympics in the race’s final 400 meters, stopping occasionally and shown signs of heat exhaustion. Though she fell across the finish line, she was released from medical care only two hours later.

**Central governor**

Tim Noakes based on an earlier idea by the 1922 Nobel Prize in Physiology or Medicine winner Archibald Hill\[56\] has proposed the existence of a central governor. In this, the brain continuously adjusts the power output by muscles during exercise in regard to a safe level of exertion. These neural calculations factor in prior length of strenuous exercise, the planning duration of further exertion, and the present metabolic state of the body. This adjusts the number of activated skeletal muscle motor units, and is subjectively experienced as fatigue and exhaustion. The idea of a central governor rejects the earlier idea that fatigue is only caused by mechanical failure of the exercising muscles ("peripheral fatigue"). Instead, the brain models the metabolic limits of the body to ensure that whole body homeostasis is protected, in particular that the heart is stopped from developing myocardial ischemia, and an emergency reserve is always maintained. The idea of the central governor has been questioned since 'physiological catastrophes' can and do occur suggesting athletes (such as Dorando Pietri, Jim Peters and Gabriela Andersen-Schiess) can over-ride the ‘central governor’.

**Other factors**

The exercise fatigue has also been suggested to be effected by:

- brain hyperthermia\[1\]
- glycogen depletion in brain cells
- reactive oxygen species impairing skeletal muscle function
- reduced level of glutamate secondary to uptake of ammonia in the brain
- Fatigue in diaphragm and abdominal respiratory muscles limiting breathing
- Impaired oxygen supply to muscles
- Ammonia effects upon the brain
- Serotonin pathways in the brain

**Cardiac biomarkers**

Prolonged exercise such as marathons can increase cardiac biomarkers such as troponin, B-type natriuretic peptide (BNP), and ischemia-modified albumin. This can be misinterpreted by medical personnel as signs of myocardial ischemia, or cardiac dysfunction. In these clinical conditions, such cardiac biomarkers are produced by irreversible injury of muscles. In contrast, the processes that create them after strenuous exertion in endurance sports are reversible, with their levels returning to normal within 24-hours (further research, however, is still needed).

**Human evolution**

Humans are specifically adapted to engage in prolonged strenuous muscular activity (such as efficient long distance bipedal running). This capacity for endurance running evolved to allow the running down of game animals by persistent slow but constant chase over many hours.\(^7\)

Central to the success of this is the ability of the human body, unlike that of the animals they hunt, to effectively remove muscle heat waste. In most animals, this is stored by allowing a temporary increase in body temperature. This allows them to escape from animals that quickly speed after them for a short duration (the way nearly all predators catch their prey). Humans unlike other animals that catch prey remove heat with a specialized thermoregulation based on sweat evaporation. One gram of sweat can remove 2,598 J of heat energy.\(^7\) Another mechanism is increased skin blood flow during exercise that allows for greater convective heat loss that is aided by the upright posture. This skin based cooling has involved humans in acquiring an
increased number of sweat glands, combined with a lack of body fur that would otherwise stop air circulation and efficient evaporation. Because humans can remove exercise heat, they can avoid the fatigue from heat exhaustion that affects animals chased in persistence hunting, and so eventually catch them when they fatigued from heat exhaustion due to being forced to constantly move.

**Personality psychology**, also known as *personology*, is the study of the *person*, that is, the whole human individual. Most people, when they think of personality, are actually thinking of personality *differences* - types and traits and the like. This is certainly an important part of personality psychology, since one of the characteristics of persons is that they can differ from each other quite a bit. But the main part of personality psychology addresses the broader issue of "what is it to be a person."

Personality psychologists view their field of study as being at the top (of course) of a pyramid of other fields in psychology, each more detailed and precise than the ones above. Practically speaking, that means that personality psychologists must take into consideration biology (especially neurology), evolution and genetics, sensation and perception, motivation and emotion, learning and memory, developmental psychology, psychopathology, psychotherapy, and whatever else might fall between the cracks.

Since this is quite an undertaking, personality psychology may also be seen as the least scientific (and most philosophical) field in psychology. It is for this reason that most personality courses in colleges still teach the field in terms of *theories*. We have dozens and dozens of theories, each emphasizing different aspects of personhood, using different methods, sometimes agreeing with other theories, sometimes disagreeing.

Like all psychologists - and all scientists - personality psychologists yearn for a *unified* theory, one we can all agree on, one that is firmly rooted in solid scientific evidence. Unfortunately, that is easier said then done. People are very hard to study. We are looking at an enormously complicated organism (one with "mind," whatever that is), embedded in not only a physical environment, but in a social one made up of
more of these enormously complicated organisms. Too much is going on for us to easily simplify the situation without making it totally meaningless by doing so!

We need to take a look at the various research methods available to us as personality psychologists to understand where we stand...

There are two broad classes of research methods: quantitative and qualitative. Quantitative methods involve measurements and qualitative methods don't. Measurement is very important to science because scientists want to get beyond the purely subjective and to the more objective. If my dear wife and I are both looking at a man and I say "he's short," she may say "no, he's not - he's quite tall!" we are stuck with two subjective opinions. If we take out a tape measure, we can together measure the man to discover that he is, in fact, 5 foot 8 inches. Since I am 6 foot 2, I might think of him as short. My wife is 5 foot 2, and she might see him as tall. But there will be no argument about what the measuring tape says!

(Actually, there won't be any arguing in any case, since my wife is clearly always correct.)

A patch of color may seem blue to me and green to you. A piece of music may seem fast to me and slow to you. A person might seem shy to me and outgoing to you. But if we measure the wavelength of color, or the rhythm of the music, or find a way to give a number to shyness-outgoingness, we can agree. We become "objective." Creating personality tests to measure personality traits is a common activity of personality psychologists.

If you take two different forms of measurement - such as a measuring tape and a weight scale - and we measure the height and weight of a few hundred of our nearest and dearest friends, we can examine whether the two measures relate to each other somehow. This is called correlation. And, as you might expect, people's heights and weights do tend to correlate: The taller you are, generally speaking the heavier you are. Of course, there will be some folks who are tall but quite light and some who are short but quite heavy, and lots of variation in between, but there will indeed be a modest, but significant, correlation.
You might be able to do the same thing with something involving personality. For example, you might want to see if people who are shy are also more intelligent than people who are outgoing. So develop a way to measure shyness-outgoingness and a way to measure intelligence (an IQ test!), and measure a few thousand people. Compare the measures and see if they correlate. In the case of this example, you would likely find little correlation, despite our stereotypes. Correlation is a popular technique in psychology, including personality.

What correlation can't help you with is finding what causes what. Does height somehow cause weight? Or is it the other way around? Does being shy cause you to be smarter, or does being smarter cause you to be shy? You can't say. It could be one way or the other, or in fact there could be some other variable that is the cause of both.

That's where experimentation comes in. Experiments are the "gold standard" of science, and all of us personality psychologists wish we had an easier time doing them. In the prototypical experiment, we actually manipulate one of the variables (the independent one) and then measure a second variable (the dependent one).

So, for example, you can measure the degree of rotation of the volume knob on your radio, and then measure the actually volume of the music that comes out of the speakers. What you would find, obviously, is that the further you turn the knob, the louder the volume. They correlate, but this time, because the knob was actually manipulated (literally in this case) and the volume measured after, you know that the rotation of the knob is in some way a cause of the volume.

Taking this idea into the world of personality, we could show people scary movies that have been rated as to how scary they are. Then we could measure their anxiety (with an instrument that measures how sweaty our hands get, for example, or with a simple test where we ask them to rate how frightened they are). Then we can see if they correlate. And, of course, they would to some degree. Plus we now know that the scarier the movie, the more scared we get. A breakthrough in psychological science!
There are several things that make measurement, correlation, and experiments difficult for personality psychologists. First, it isn't always easy to measure the kinds of things we are interested in in any meaningful way. Even the examples of shyness-easygoingness and intelligence and anxiety are iffy at best. How well do people recognize their own anxiety? How well does a sweat-test relate to anxiety? Can a paper-and-pencil test really tell you if you are smart or shy?

When we get to some of the most important ideas in personality - ideas like consciousness, anger, love, motivations, neurosis - the problem looks at present to be insurmountable.

Another difficulty is the problem of control. In experiments, especially, you need to control all the irrelevant variables in order to see whether the independent variable actually affects the dependent variable. But there are millions of variables impacting us at every moment. Even our whole history as a person is right there, influencing the outcome. No sterile lab will ever control those!

Even if you could control many of the variables - the psychological version of a sterile lab - could you now generalize beyond that situation? People act differently in a lab than at home. They act differently when they are being observed than when they do in private. Experiments are actually social situations, and they are different from other social situations. Realism might be the answer, but how does one accomplish realism at the same time as one keeps control?

Then there's the problem of samples. If a chemist works with a certain rock, he or she can be pretty confident that other samples of the same rock will respond similarly to any chemicals applied. Even a biologist observing a rat can feel pretty comfortable that this rat is similar to most rats (although that has been debated!). This is certainly not true for people.

In psychology, we often use college freshmen as subjects for our research. They are convenient - easily available, easy to coax into participation (with promises of "points"), passive, docile.... But whatever results you get with college freshmen, can you generalize them to people in factories? to people on the other side of the world?
to people 100 years ago or 100 years in the future? Can you even generalize to college seniors? This problem transcends the issues for quantitative methods to qualitative methods as well.

What about qualitative methods, then? Qualitative methods basically involve careful observation of people, followed by careful description, followed by careful analysis. The problem with qualitative methods is clear: How can we be certain that the researcher is indeed being careful? Or, indeed, that the researcher is even being honest? Only by replicating the studies.

There are as many qualitative methods as there are quantitative methods. In some, the researcher actually introspects - looks into his own experiences - for evidence. This sounds weak, but in fact it is ultimately the only way for a researcher to directly access the kinds of things that go on in the privacy of his or her own mind! This method is common among existential psychologists.

Other researchers observe people "in the wild," sort of like ethologists watch birds or chimps or lions, and describe their behavior. The good thing here is that it is certainly easier to replicate observations than introspections. Anthropologists typically rely on this method, as do many sociologists.

One of the most common qualitative method in personality is the interview. We ask questions, sometimes prearranged ones, sometimes by the seat of our pants, of a variety of people who have had a certain experience (such as being abducted by a UFO) or fall into a certain category (such as being diagnosed as having schizophrenia). The case study is a version of this that focusses on gaining a rather complete understanding of a single individual, and is the basis for a great deal of personality theory.

Ultimately, science is just careful observation plus careful thinking. So we personality psychologists do the best we can with our research methods. That does
leave us to consider the business of careful thinking, though, and there are a couple of particulars there to consider as well.

First, we must always be on guard against ethnocentrism. Ethnocentrism is (for our purposes) the tendency we all have to see things from the perspective of our own culture. We are born into our culture, and most of us never truly leave it. We learn it so young and so thoroughly that it becomes "second nature."

Freud, for example, was born in 1856 in Moravia (part of what is now the Czech Republic). His culture - central European, German speaking, Victorian era, Jewish... - was quite different from our own (whatever that might be). One thing his culture taught was that sex was a very bad thing, an animal thing, a sinful thing. Masturbation was thought to lead to criminality, retardation, and mental illness. Women who were capable of orgasms were assumed to be nymphomaniacs, unlikely to make good wives and mothers, and possibly destined for prostitution.

Freud is to be respected in that he was able to rise above his cultural attitudes about sex and suggest that sexuality - even female sexuality - was a natural (if animalistic) aspect of being human, and that repressing one's sexuality could lead to debilitating psychological disorders. On the other hand, he didn't quite see the possibility of a new western culture - our own - wherein sexuality was not only accepted as normal but as something we should all be actively engaged in at every opportunity.

A second thing to be on guard against is egocentrism. Again, for our purposes, we are talking about the tendency to see our experiences, our lives, as being the standard for all people. Freud was very close to his mother. She was 20 when she had him, while his father was 40. She stayed home to raise him, while his father was working the usual 16 hour days of the time. Little Freud was a child genius who could talk about adult matters by the time he was five. He was, as his mother once put it, her "golden Siggy."

These circumstances are unusual, even for his time and place. Yet, as he developed his theory, he took it for granted that the mother-son connection was at the center of psychology for one and all! That, of course, was a mistake: egocentrism.
Last, we need to be on guard against **dogmatism**. A dogma is a set of ideas that the person who holds those ideas will not permit to be criticized. Do you have evidence against my beliefs? I don't want to hear them. Do you notice some logical flaws in my arguments? They are irrelevant. Dogmas are common in the worlds of religion and politics, but they have absolutely no place in science! Science should always be open to new evidence and criticism. Science isn't "Truth;" it is just a movement in that general direction. When someone claims they have "Truth," science comes to a grinding halt.

Well, sadly, Freud was guilty of dogmatism. He became so attached to his ideas that he refused to accept disagreement from his "disciples." (Notice the religious term here!) Some, like Jung and Adler, would eventually go on to develop their own theories. If only Freud had not been dogmatic, if only he had been open to new ideas and new evidence and allowed his theory to evolve openly, we might all be "Freudians" today - and "Freudian" would mean something quite different and much grander.

**Personality psychology**

**Personality psychology** is a branch of psychology that studies personality and individual differences. Its areas of focus include:

- Constructing a coherent picture of a person and his or her major psychological processes
- Investigating **individual differences**, that is, how people can differ from one another.
- Investigating human nature, that is, how all people's behaviour is similar.

**Personality** can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations. The word "personality" originates from the Latin *persona*, which means mask. Significantly, in the theatre of the ancient Latin-speaking world, the mask was not used as a plot device to *disguise* the identity of a character, but rather was a convention employed to represent or *typify* that character.
The pioneering American psychologist, Gordon Allport (1937) described two major ways to study personality, the nomothetic and the idiographic. *Nomothetic psychology* seeks general laws that can be applied to many different people, such as the principle of self-actualization, or the trait of extraversion. *Idiographic psychology* is an attempt to understand the unique aspects of a particular individual.

The study of personality has a broad and varied history in psychology, with an abundance of theoretical traditions. The major theories include dispositional (trait) perspective, psychodynamic, humanistic, biological, behaviorist and social learning perspective. There is no consensus on the definition of "personality" in psychology. Most researchers and psychologists do not explicitly identify themselves with a certain perspective and often take an eclectic approach. Some research is empirically driven such as the "Big 5" personality model whereas other research emphasizes theory development such as psychodynamics. There is also a substantial emphasis on the applied field of personality testing. In psychological education and training, the study of the nature of personality and its psychological development is usually reviewed as a prerequisite to courses in abnormal or clinical psychology.

**Philosophical assumptions**

Many of the ideas developed by historical and modern personality theorists stem from the basic philosophical assumptions they hold. The study of personality is not a purely empirical discipline, as it brings in elements of art, science, and philosophy to draw general conclusions. The following five categories are some of the most fundamental philosophical assumptions on which theorists disagree:

1. **Freedom versus Determinism**

This is the debate over whether we have control over our own behavior and understand the motives behind it (Freedom), or if our behavior is causally determined by forces beyond our control (Determinism). Determinism has been considered unconscious, environmental, or biological by various theories.
2. Heredity versus Environment

Personality is thought to be determined largely by genetics and biology, by environment and experiences, or by some combination resulting thereof. There is evidence for all possibilities. Contemporary research suggests that most personality traits are based on the joint influence of genetics and environment.

3. Uniqueness versus Universality

The argument over whether we are all unique individuals (Uniqueness) or if humans are basically similar in their nature (Universality). Gordon Allport, Abraham Maslow, and Carl Rogers were all advocates of the uniqueness of individuals. Behaviorists and cognitive theorists, in contrast, emphasized the importance of universal principles such as reinforcement and self-efficacy.

4. Active versus Reactive

Do we primarily act through our own initiative (Active), or react to outside stimuli (Reactive)? Behavioral theorists typically believe that humans are passively shaped by their environments, whereas humanistic and cognitive theorists believe that humans are more active.

5. Optimistic versus Pessimistic

Personality theories differ on whether people can change their personalities (Optimism), or if they are doomed to remain the same throughout their lives (Pessimism). Theories that place a great deal of emphasis on learning are often, but not always, more optimistic than theories that do not emphasize learning.

Personality theories

Critics of personality theory claim personality is "plastic" across time, places, moods, and situations. Changes in personality may indeed result from diet (or lack thereof), medical effects, significant events, or learning. However, most personality theories
emphasize stability over fluctuation. The definition of personality that is most widely supported to date is attributed to the neurologist Paul Roe. He stated personality to be "an individual's predisposition to think certain patterns of thought, and therefore engage in certain patterns of behaviour".

**Trait theories**

According to the *Diagnostic and Statistical Manual* of the American Psychiatric Association, personality traits are "enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts." Theorists generally assume a) traits are relatively stable over time, b) traits differ among individuals (e.g. some people are outgoing while others are reserved), and c) traits influence behavior.

The most common models of traits incorporate three to five broad dimensions or factors. The least controversial dimension, observed as far back as the ancient Greeks, is simply extraversion and introversion (outgoing and physical-stimulation-oriented vs. quiet and physical-stimulation-averse).

- **Gordon Allport** delineated different kinds of traits, which he also called dispositions. *Central traits* are basic to an individual's personality, while *secondary traits* are more peripheral. *Common traits* are those recognized within a culture and thus may vary from culture to culture. *Cardinal traits* are those by which an individual may be strongly recognized.

- **Raymond Cattell's** research propagated a two-tiered personality structure with sixteen "primary factors" (16 Personality Factors) and five "secondary factors."

- **Hans Eysenck** believed just three traits—extraversion, neuroticism and psychoticism—were sufficient to describe human personality. Differences between Cattell and Eysenck emerged due to preferences for different forms of factor analysis, with Cattell using oblique, Eysenck orthogonal, rotation to analyse the factors that emerged when personality questionnaires were subjected to statistical analysis. Today, the Big Five factors have the weight of
a considerable amount of empirical research behind them, building on the work of Cattell and others.

- **Lewis Goldberg** proposed a five-dimension personality model, nicknamed the "Big Five":

1. **Openness to Experience**: the tendency to be imaginative, independent, and interested in variety vs. practical, conforming, and interested in routine.
2. **Conscientiousness**: the tendency to be organized, careful, and disciplined vs. disorganized, careless, and impulsive.
3. **Extraversion**: the tendency to be sociable, fun-loving, and affectionate vs. retiring, somber, and reserved.
4. **Agreeableness**: the tendency to be softhearted, trusting, and helpful vs. ruthless, suspicious, and uncooperative.
5. **Neuroticism**: the tendency to be calm, secure, and self-satisfied vs. anxious, insecure, and self-pitying.

The Big Five contain important dimensions of personality. However, some personality researchers argue that this list of major traits is not exhaustive. Some support has been found for two additional factors: excellent/ordinary and evil/decent. However, no definitive conclusions have been established.

- **John L. Holland's RIASEC** vocational model, commonly referred to as the **Holland Codes**, stipulates that six personality traits lead people to choose their career paths. In this circumplex model, the six types are represented as a hexagon, with adjacent types more closely related than those more distant. The model is widely used in vocational counseling.

Trait models have been criticized as being purely descriptive and offering little explanation of the underlying causes of personality. Eysenck's theory, however, does propose biological mechanisms as driving traits, and modern behavior genetics researchers have shown a clear genetic substrate to them. Another potential weakness of trait theories is that they lead people to accept oversimplified classifications, or worse offer advice, based on a superficial analysis of their personality. Finally, trait models often underestimate the effect of specific situations on people's behavior. It is
important to remember that traits are statistical generalizations that do not always correspond to an individual's behavior.

**Type theories**

Personality type refers to the psychological classification of different types of people. Personality types are distinguished from personality traits, which come in different levels or degrees. For example, according to type theories, there are two types of people, introverts and extraverts. According to trait theories, introversion and extraversion are part of a continuous dimension, with many people in the middle. The idea of psychological types originated in the theoretical work of Carl Jung and William Marston, whose work is reviewed in Dr. Travis Bradberry's *The Personality Code*. Jung's seminal 1921 book on the subject is available in English as *Psychological Types*.

Building on the writings and observations of Jung, during World War II, Isabel Briggs Myers and her mother, Katharine C. Briggs, delineated personality types by constructing the Myers-Briggs Type Indicator. This model was later used by David Keirsey with a different understanding from Jung, Briggs and Myers. In the former Soviet Union, Lithuanian Aušra Augustinavičiūtė independently derived a model of personality type from Jung's called Socionics.

The model is an older and more theoretical approach to personality, accepting extraversion and introversion as basic psychological orientations in connection with two pairs of psychological functions:

- Perceiving functions: sensing and intuition (trust in concrete, sensory-oriented facts vs. trust in abstract concepts and imagined possibilities)
- Judging functions: thinking and feeling (basing decisions primarily on logic vs. considering the effect on people).

Briggs and Myers also added another personality dimension to their type indicator to measure whether a person prefers to use a judging or perceiving function when interacting with the external world. Therefore they included questions designed to
indicate whether someone wishes to come to conclusions (judgment) or to keep options open (perception).

This personality typology has some aspects of a trait theory: it explains people's behaviour in terms of opposite fixed characteristics. In these more traditional models, the sensing/intuition preference is considered the most basic, dividing people into "N" (intuitive) or "S" (sensing) personality types. An "N" is further assumed to be guided either by thinking or feeling, and divided into the "NT" (scientist, engineer) or "NF" (author, humanitarian) temperament. An "S", by contrast, is assumed to be guided more by the judgment/perception axis, and thus divided into the "SJ" (guardian, traditionalist) or "SP" (performer, artisan) temperament. These four are considered basic, with the other two factors in each case (including always extraversion/introversion) less important. Critics of this traditional view have observed that the types can be quite strongly stereotyped by professions (although neither Myers nor Keirsey engaged in such stereotyping in their type descriptions), and thus may arise more from the need to categorize people for purposes of guiding their career choice. This among other objections led to the emergence of the five-factor view, which is less concerned with behavior under work conditions and more concerned with behavior in personal and emotional circumstances. (It should be noted, however, that the MBTI is not designed to measure the "work self," but rather what Myers and McCaulley called the "shoes-off self.") Some critics have argued for more or fewer dimensions while others have proposed entirely different theories (often assuming different definitions of "personality").

**Type A and Type B personality theory:** During the 1950s, Meyer Friedman and his co-workers defined what they called Type A and Type B behavior patterns. They theorized that intense, hard-driving Type A personalities had a higher risk of coronary disease because they are "stress junkies." Type B people, on the other hand, tended to be relaxed, less competitive, and lower in risk. There was also a Type AB mixed profile. Dr. Redford Williams, cardiologist at Duke University, refuted Friedman’s theory that Type A personalities have a higher risk of coronary heart disease; however, current research indicates that only the hostility component of Type A may have health implications. Type A/B theory has been extensively criticized by
psychologists because it tends to oversimplify the many dimensions of an individual's personality.

**Psychoanalytic theories**

Psychoanalytic theories explain human behaviour in terms of the interaction of various components of personality. Sigmund Freud was the founder of this school. Freud drew on the physics of his day (thermodynamics) to coin the term psychodynamics. Based on the idea of converting heat into mechanical energy, he proposed psychic energy could be converted into behavior. Freud's theory places central importance on dynamic, unconscious psychological conflicts.

Freud divides human personality into three significant components: the id, ego, and super-ego. The **id** acts according to the *pleasure principle*, demanding immediate gratification of its needs regardless of external environment; the **ego** then must emerge in order to realistically meet the wishes and demands of the id in accordance with the outside world, adhering to the *reality principle*. Finally, the **superego** (conscience) inculcates moral judgment and societal rules upon the ego, thus forcing the demands of the id to be met not only realistically but morally. The superego is the last function of the personality to develop, and is the embodiment of parental/social ideals established during childhood. According to Freud, personality is based on the dynamic interactions of these three components.

The channeling and release of sexual (libidal) and aggressive energies, which ensues from the "Eros" (sex; instinctual self-preservation) and "Thanatos" (death; instinctual self-annihilation) drives respectively, are major components of his theory. It is important to note Freud's broad understanding of sexuality included all kinds of pleasurable feelings experienced by the human body.

Freud proposed five psychosexual stages of personality development. He believed adult personality is dependent upon early childhood experiences and largely determined by age five. Fixations that develop during the Infantile stage contribute to adult personality and behavior.
One of Sigmund Freud's earlier associates, Alfred Adler, did agree with Freud early childhood experiences are important to development, and believed birth order may influence personality development. Adler believed the oldest was the one that set high goals to achieve to get the attention they lost back when the younger siblings were born. He believed the middle children were competitive and ambitious possibly so they are able to surpass the first-born’s achievements, but were not as much concerned about the glory. Also he believed the last born would be more dependent and sociable but be the baby. He also believed that the only child loves being the center of attention and matures quickly, but in the end fails to become independent.

Heinz Kohut thought similarly to Freud’s idea of transference. He used narcissism as a model of how we develop our sense of self. Narcissism is the exaggerated sense of one self in which is believed to exist in order to protect one's low self esteem and sense of worthlessness. Kohut had a significant impact on the field by extending Freud's theory of narcissism and introducing what he called the 'self-object transferences' of mirroring and idealization. In other words, children need to idealize and emotionally "sink into" and identify with the idealized competence of admired figures such as parents or older siblings. They also need to have their self-worth mirrored by these people. These experiences allow them to thereby learn the self-soothing and other skills that are necessary for the development of a healthy sense of self.

Another important figure in the world of personality theory was Karen Horney. She is credited with the development of the "real self" and the "ideal self". She believes all people have these two views of their own self. The "real self" is how you really are with regards to personality, values, and morals; but the "ideal self" is a construct you apply to yourself to conform to social and personal norms and goals. Ideal self would be "I can be successful, I am CEO material"; and real self would be "I just work in the mail room, with not much chance of high promotion".

**Behaviorist theories**

Behaviorists explain personality in terms of the effects external stimuli have on behavior. It was a radical shift away from Freudian philosophy. This school of thought was developed by B. F. Skinner who put forth a model which emphasized the
mutual interaction of the person or "the organism" with its environment. Skinner believed children do bad things because the behavior obtains attention that serves as a reinforcer. For example: a child cries because the child's crying in the past has led to attention. These are the response, and consequences. The response is the child crying, and the attention that child gets is the reinforcing consequence. According to this theory, people's behavior is formed by processes such as operant conditioning. Skinner put forward a "three term contingency model" which helped promote analysis of behavior based on the "Stimulus - Response - Consequence Model" in which the critical question is: "Under which circumstances or antecedent 'stimuli' does the organism engage in a particular behavior or 'response', which in turn produces a particular 'consequence'?"

Richard Herrnstein extended this theory by accounting for attitudes and traits. An attitude develops as the response strength (the tendency to respond) in the presences of a group of stimuli become stable. Rather than describing conditionable traits in non-behavioral language, response strength in a given situation accounts for the environmental portion. Herrstein also saw traits as having a large genetic or biological component as do most modern behaviorists.

Ivan Pavlov is another notable influence. He is well known for his classical conditioning experiments involving dogs. These physiological studies led him to discover the foundation of behaviorism as well as classical conditioning.

Social cognitive theories

In cognitivism, behavior is explained as guided by cognitions (e.g. expectations) about the world, especially those about other people. Cognitive theories are theories of personality that emphasize cognitive processes such as thinking and judging.

Albert Bandura, a social learning theorist suggested the forces of memory and emotions worked in conjunction with environmental influences. Bandura was known mostly for his "Bobo Doll experiment". During these experiments, Bandura video taped a college student kicking and verbally abusing a bobo doll. He then showed this video to a class of kindergarten children who were getting ready to go out to play. When they entered the play room, they saw bobo dolls, and some hammers. The
people observing these children at play saw a group of children beating the doll. He called this study and his findings observational learning, or modeling.

Early examples of approaches to cognitive style are listed by Baron (1982). These include Witkin's (1965) work on field dependency, Gardner's (1953) discovering people had consistent preference for the number of categories they used to categorise heterogeneous objects, and Block and Petersen's (1955) work on confidence in line discrimination judgments. Baron relates early development of cognitive approaches of personality to ego psychology. More central to this field have been:

- Self-efficacy work, dealing with confidence people have in abilities to do tasks.
- Locus of control theory dealing with different beliefs people have about whether their worlds are controlled by themselves or external factors;
- Attributional style theory dealing with different ways in which people explain events in their lives. This approach builds upon locus of control, but extends it by stating we also need to consider whether people attribute to stable causes or variable causes, and to global causes or specific causes.

Various scales have been developed to assess both attributional style and locus of control. Locus of control scales include those used by Rotter and later by Duttweiler, the Nowicki and Strickland (1973) Locus of Control Scale for Children and various locus of control scales specifically in the health domain, most famously that of Kenneth Wallston and his colleagues, The Multidimensional Health Locus of Control Scale. Attributional style has been assessed by the Attributional Style Questionnaire, the Expanded Attributional Style Questionnaire, the Attributions Questionnaire, the Real Events Attributional Style Questionnaire and the Attributional Style Assessment Test.

Walter Mischel (1999) has also defended a cognitive approach to personality. His work refers to "Cognitive Affective Units", and considers factors such as encoding of stimuli, affect, goal-setting, and self-regulatory beliefs. The term "Cognitive Affective Units" shows how his approach considers affect as well as cognition.
Personal Construct Psychology (PCP) is a theory of personality developed by the American psychologist George Kelly in the 1950s. From the theory, Kelly derived a psychotherapy approach and also a technique called The Repertory Grid Interview that helped his patients to uncover their own "constructs" (defined later) with minimal intervention or interpretation by the therapist. The Repertory Grid was later adapted for various uses within organizations, including decision-making and interpretation of other people's world-views. From his 1963 book, A Theory of Personality, pp. 103–104:

- Fundamental Postulate: A person's processes are psychologically channelized by the ways in which the person anticipates events.
- Construction Corollary: A person anticipates events by construing their replications.
- Individuality Corollary: People differ from one another in their construction of events.
- Organization Corollary: Each person characteristically evolves, for convenience in anticipating events, a construction system embracing ordinal relationships between constructs.
- Dichotomy Corollary: A person's construction system is composed of a finite number of dichotomous constructs.
- Choice Corollary: People choose for themselves the particular alternative in a dichotomized construct through which they anticipate the greater possibility for extension and definition of their system.
- Range Corollary: A construct is convenient for the anticipation of a finite range of events only.
- Experience Corollary: A person's construction system varies as the person successively construes the replication of events.
- Modulation Corollary: The variation in a person's construction system is limited by the permeability of the constructs within whose ranges of conveniences the variants lie.
- Fragmentation Corollary: A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other.
- **Commonality Corollary**: To the extent that one person employs a construction of experience which is similar to that employed by another, the psychological processes of the two individuals are similar to each other.

- **Sociality Corollary**: To the extent that one person construes another's construction processes, that person may play a role in a social process involving the other person.

**Humanistic theories**

In humanistic psychology it is emphasized people have free will and they play an active role in determining how they behave. Accordingly, humanistic psychology focuses on subjective experiences of persons as opposed to forced, definitive factors that determine behavior. Abraham Maslow and Carl Rogers were proponents of this view, which is based on the "phenomenal field" theory of Combs and Snygg (1949).

Maslow spent much of his time studying what he called "self-actualizing persons", those who are "fulfilling themselves and doing the best they are capable of doing". Maslow believes all who are interested in growth move towards self-actualizing (growth, happiness, satisfaction) views. Many of these people demonstrate a trend in dimensions of their personalities. Characteristics of self-actualizers according to Maslow include the four key dimensions:

1. **Awareness** - maintaining constant enjoyment and awe of life. These individuals often experienced a "peak experience". He defined a peak experience as an "intensification of any experience to the degree there is a loss or transcendence of self". A peak experience is one in which an individual perceives an expansion of his or herself, and detects a unity and meaningfulness in life. Intense concentration on an activity one is involved in, such as running a marathon, may invoke a peak experience.

2. **Reality and problem centered** - they have tendency to be concerned with "problems" in their surroundings.

3. **Acceptance/Spontaneity** - they accept their surroundings and what cannot be changed.
4. **Unhostile sense of humor/democratic** - they do not like joking about others, which can be viewed as offensive. They have friends of all backgrounds and religions and hold very close friendships.

Maslow and Rogers emphasized a view of the person as an active, creative, experiencing human being who lives in the present and subjectively responds to current perceptions, relationships, and encounters. They disagree with the dark, pessimistic outlook of those in the Freudian psychoanalysis ranks, but rather view humanistic theories as positive and optimistic proposals which stress the tendency of the human personality toward growth and self-actualization. This progressing self will remain the center of its constantly changing world; a world that will help mold the self but not necessarily confine it. Rather, the self has opportunity for maturation based on its encounters with this world. This understanding attempts to reduce the acceptance of hopeless redundancy. Humanistic therapy typically relies on the client for information of the past and its effect on the present, therefore the client dictates the type of guidance the therapist may initiate. This allows for an individualized approach to therapy. Rogers found patients differ in how they respond to other people. Rogers tried to model a particular approach to therapy—he stressed the reflective or empathetic response. This response type takes the client's viewpoint and reflects back his or her feeling and the context for it. An example of a reflective response would be, "It seems you are feeling anxious about your upcoming marriage". This response type seeks to clarify the therapist's understanding while also encouraging the client to think more deeply and seek to fully understand the feelings they have expressed.

**Biopsychological theories**

Some of the earliest thinking about possible biological bases of personality grew out of the case of Phineas Gage. In an 1848 accident, a large iron rod was driven through Gage's head, and his personality apparently changed as a result (although descriptions of these psychological changes are usually exaggerated).

In general, patients with brain damage have been difficult to find and study. In the 1990s, researchers began to use Electroencephalography (EEG), Positron Emission Tomography (PET) and more recently functional Magnetic Resonance Imaging (fMRI), which is now the most widely used imaging technique to help localize
personality traits in the brain. One of the founders of this area of brain research is Richard Davidson of the University of Wisconsin–Madison. Davidson's research lab has focused on the role of the prefrontal cortex (PFC) and amygdala in manifesting human personality. In particular, this research has looked at hemispheric asymmetry of activity in these regions. Neuropsychological experiments have suggested that hemispheric asymmetry can affect an individual's personality (particularly in social settings) for individuals with NLD (non-verbal learning disorder), which is marked by the impairment of nonverbal information controlled by the right hemisphere of the brain. Progress will arise in the areas of gross motor skills, inability to organize visual-spatial relations, or adapt to novel social situations. Frequently, a person with NLD is unable to interpret non-verbal cues, and therefore experiences difficulty interacting with peers in socially normative ways.

One integrative, biopsychosocial approach to personality and psychopathology, linking brain and environmental factors to specific types of activity, is the hypostatic model of personality, created by Codrin Stefan Tapu

**Personality tests**

There are two major types of personality tests. **Projective** tests assume personality is primarily unconscious and assess an individual by how he or she responds to an ambiguous stimulus, like an ink blot. The idea is unconscious needs will come out in the person's response, e.g. an aggressive person may see images of destruction. **Objective** tests assume personality is consciously accessible and measure it by self-report questionnaires. Research on psychological assessment has generally found objective tests are more valid and reliable than projective tests.

Examples of personality tests include:

- Holland Codes
- Keirsey Temperament Sorter
- Kelly's Repertory Grid
- Minnesota Multiphasic Personality Inventory
- Morrisby Profile
- Myers-Briggs Type Indicator
Gordon Allport

Gordon Willard Allport (November 11, 1897 – October 9, 1967) was an American psychologist. Allport was one of the first psychologists to focus on the study of the personality, and is often referred to as one of the founding figures of personality psychology. He rejected both a psychoanalytic approach to personality, which he thought often went too deep, and a behavioral approach, which he thought often did not go deep enough. He emphasized the uniqueness of each individual, and the importance of the present context, as opposed to past history, for understanding the personality.

Allport had a profound and lasting influence on the field of psychology, even though his work is cited much less often than other well known figures. Part of his influence stemmed from his knack for attacking and broadly conceptualizing important and interesting topics (e.g. rumor, prejudice, religion, traits). Part of his influence was a result of the deep and lasting impression he made on his students during his long teaching career, many of whom went on to have important psychological careers. Among his many students were Jerome S. Bruner, Anthony Greenwald, Stanley Milgram, Leo Postman, Thomas Pettigrew, and M. Brewster Smith.

Visit with Freud

Allport told the story in his autobiographical essay in Pattern and Growth in Personality of his visit as a young, recent college graduate to the already famous Dr. Sigmund Freud in Vienna. To break the ice upon meeting Freud, Allport recounted how he had met a boy on the train on the way to Vienna who was afraid of getting
dirty. He refused to sit down near anyone dirty, despite his mother's reassurances. Allport suggested that perhaps the boy had learned this dirt phobia from his mother, a very neat and apparently rather domineering type. After studying Allport for a minute, Freud asked, "And was that little boy you?"

Allport experienced Freud's attempt to reduce this small bit of observed interaction to some unconscious episode from his own remote childhood as dismissive of his current motivations, intentions and experience. It served as a reminder that psychoanalysis tends to dig too deeply into both the past and the unconscious, overlooking in the process the often more important conscious and immediate aspects of experience. While Allport never denied that unconscious and historical variables might have a role to play in human psychology (particularly in the immature and disordered) his own work would always emphasize conscious motivations and current context.

Allport's Trait Theory

Allport is known as a "trait" psychologist. One of his early projects was to go through the dictionary and locate every term that he thought could describe a person. This is known as the "lexical hypothesis." From this, he developed a list of 4500 trait like words. He organized these into three levels of traits.

1. **Cardinal trait** - This is the trait that dominates and shapes a person's behavior. These are rare as most people lack a single theme that shape their lives.

2. **Central trait** - This is a general characteristic found in some degree in every person. These are the basic building blocks that shape most of our behavior although they are not as overwhelming as cardinal traits. An example of a central trait would be honesty.

3. **Secondary trait** - These are characteristics seen only in certain circumstances (such as particular likes or dislikes that a very close friend may know). They must be included to provide a complete picture of human complexity.

Genotypes and Phenotypes
Allport hypothesized the idea of internal and external forces that influence an individual’s behavior. He called these forces Genotypes and Phenotypes. **Genotypes** are internal forces relates to how a person retains information and uses it to interact with the external world. **Phenotypes** are external forces, these relate to the way an individual accepts his surroundings and how others influence their behavior. These forces generate the ways in which we behave and are the groundwork for the creation of individual traits.

**Functional Autonomy**

Allport was one of the first researchers to draw a distinction between Motive and Drive. He suggested that a drive formed as a reaction to a motive may outgrow the motive as a reason. The drive then is autonomous and distinct from the motive, whether it is instinct or any other. Allport gives the example of a man who seeks to perfect his task or craft. His reasons may be a sense of inferiority engrained in his childhood but his diligence in his work and the motive it acquires later on is a need to excel in his chosen profession. In the words of Allport, the theory "avoids the absurdity of regarding the energy of life now, in the present, as somehow consisting of early archaic forms (instincts, prepotent reflexes, or the never-changing Id). Learning brings new systems of interests into existence just as it does new abilities and skills. At each stage of development these interests are always contemporary; whatever drives, drives now." We also can see functional autonomy (the notion that motives can become independent of their origins) in the drive associated with making money to buy goods and services when it becomes an end in itself. Many obsessive and compulsive acts and thoughts might be manifestations of functional autonomy.

**Self-actualization**

**Self-actualization** is a term that has been used in various psychology theories, often in slightly different ways (e.g., Goldstein, Maslow, Rogers). The term was originally introduced by the organismic theorist Kurt Goldstein for the motive to realize all of one's potentialities. In his view, it is the master motive—indeed, the only real motive a person has, all others being merely manifestations of it. However, the concept was brought to prominence in Abraham Maslow's hierarchy of needs theory as the final
level of psychological development that can be achieved when all basic and mental needs are fulfilled and the "actualisation" of the full personal potential takes place.

**Self-actualization in Goldstein's Theory**

According to Kurt Goldstein's book *The Organism: A Holistic Approach to Biology Derived from Pathological Data in Man*, self-actualization is "the tendency to actualize, as little as possible, [the organism's] individual capacities" in the world. The tendency to self-actualization is "the only drive by which the life of an organism is determined." Goldstein defined self-actualization as a driving life force that will ultimately lead to maximizing one's abilities and determine the path of one's life; compare will to power.

**Self-actualization and Maslow's Hierarchy**

The term was later used by Abraham Maslow in his article, *A Theory of Human Motivation*. Maslow explicitly defines self-actualization to be "the desire for self-fulfillment, namely the tendency for him [the individual] to become actualized in what he is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming." Maslow used the term self-actualization to describe a desire, not a driving force, that could lead to realizing one's capabilities. Maslow did not feel that self-actualization determined one's life; rather, he felt that it gave the individual a desire, or motivation to achieve budding ambitions. Maslow's usage of the term is now popular in modern psychology when discussing personality from the humanistic approach.

A basic definition from a typical college text book defines self-actualization according to Maslow simply as "the full realization of one's potential" without any mention of Goldstein.

A more explicit definition of self-actualization according to Maslow is "intrinsic growth of what is already in the organism, or more accurately of what is the organism itself...self-actualization is growth-motivated rather than deficiency-motivated." This explanation emphasizes the fact that self-actualization can not normally be reached until other lower order necessities of Maslow's hierarchy of needs are satisfied. While
Goldstein defined self-actualization as a driving force, Maslow uses the term to describe personal growth that takes place once lower order needs have been met.

Self-Actualised person according to Maslow "He possesses an unusual ability to detect the spurious, the fake, the dishonest in personality, and in general to judge the people correctly and efficiently"

Common traits amongst people who have reached self-actualization are:

- They embrace reality and facts rather than denying truth.
- They are spontaneous.
- They are interested in solving problems.
- They are accepting of themselves and others and lack prejudice.

For Goldstein, it was a motive and, for Maslow, a level of development; for both, however, roughly the same kinds of qualities were expressed: independence, autonomy, a tendency to form few but deep friendships, a "philosophical" sense of humor, a tendency to resist outside pressures and a general transcendence of the environment rather than "coping" with it.

Self-actualization has been discussed by Schott in connection with Transpersonal business studies.

**Self Actualization in Psychology**

Self actualization resides at the top of Maslow's hierarchy of needs and is considered a part of the humanistic approach to personality. The humanistic approach is one of several methods used in psychology for studying, understanding, and evaluating personality. The humanistic approach was developed because other approaches, such as the psychodynamic approach made famous by Sigmund Freud, focused on unhealthy individuals that exhibited disturbed behavior.

The humanistic approach focuses on healthy, motivated people and tries to determine how they define the self while maximizing their potential.
Stemming from this branch of psychology is Maslow's hierarchy of needs. According to Maslow, people have lower order needs that in general must be fulfilled before high order needs can be satisfied. As a person moves up Maslow's hierarchy of needs, eventually they will reach the summit—self actualization. Maslow's hierarchy of needs begins with the most basic necessities deemed "the physiological needs" in which the individual will seek out items like food and water, and must be able to perform basic functions such as breathing and sleeping. Once these needs have been met, a person can move on to fulfilling the "the safety needs", where they will attempt to obtain a sense of security, physical comforts and shelter, employment, and property.

The next level is "the belongingness and love needs", where people will strive for social acceptance, affiliations, a sense of belongingness and being welcome, sexual intimacy, and perhaps a family. Next are "the esteem needs", where the individual will desire a sense of competence, recognition of achievement by peers, and respect from others. Some argue that once these needs are met, an individual is primed for self actualization. Others argue that there are two more phases an individual must progress through before self actualization can take place. These include "the cognitive needs", where a person will desire knowledge and an understanding of the world around them, and "the aesthetic needs" which include a need for "symmetry, order, and beauty". Once all these needs have been satisfied, the final stage of Maslow's hierarchy—self actualization—can take place. Classical Adlerian psychotherapy promotes this level of psychological development, utilizing the foundation of a 12-stage therapeutic model to realistically satisfy the basic needs, leading to an advanced stage of "meta-therapy," creative living, and self/other/task-actualization. Maslow's writings are used as inspirational resources. The key to Maslow's writings is understanding that there are no keys. Self Actualization is predicated on the individual having their lower deficiency needs met. Once a person has moved through feeling and believing that they are deficient, they naturally seek to grow into who they are, that is self-actualize.
Big Five personality traits

In contemporary psychology, the "Big Five" factors of personality are five broad domains or dimensions of personality which are used to describe human personality. The initial model was advanced by Ernest Tupes and Raymond Cristal, based on work done at the U.S. Air Force Personnel Laboratory in the late 1950s; unfortunately, they documented their work only in an obscure technical report (Tupes, E.C., & Cristal, R.E., Recurrent Personality Factors Based on Trait Ratings. Technical Report ASD-TR-61-97, Lackland Air Force Base, TX: Personnel Laboratory, Air Force Systems Command, 1961). In 1990, J.M. Digman advanced his five factor model of personality, which Goldberg extended to the highest level of organization (Goldberg, 1993). These five over-arching domains have been found to contain and subsume more-or-less all known personality traits within their five domains and to represent the basic structure behind all personality traits. They have brought order to the often-bewildering array of specific lower-level personality concepts that are constantly being proposed by psychologists, which are often found to be overlapping and confusing. These five factors provide a rich conceptual framework for integrating all the research findings and theory in personality psychology. The Big Five traits are also referred to as the "Five Factor Model" or FFM (Costa & McCrae, 1992), and as the Global Factors of personality (Russell & Karol, 1994).

The Big Five model is considered to be one of the most comprehensive, empirical, data-driven research findings in the history of personality psychology. Identifying the traits and structure of human personality has been one of the most fundamental goals in all of psychology. Over three or four decades of research, these five broad factors were gradually discovered and defined by several independent sets of researchers (Digman, 1990). These researchers began by studying all known personality traits and then factor-analyzing hundreds of measures of these traits (in self-report and questionnaire data, peer ratings, and objective measures from experimental settings) in order to find the basic, underlying factors of personality.

At least four sets of researchers have worked independently for decades on this problem and have identified generally the same Big Five factors: Tupes & Cristal were first, followed by Goldberg at the Oregon Research Institute, Cattell at the
University of Illinois, and Costa and McCrae at the National Institutes of Health. These four sets of researchers used somewhat different methods in finding the five traits, and thus each set of five factors has somewhat different names and definitions. However, all have been found to be highly inter-correlated and factor-analytically aligned.

It is important to note that these traits have been found to organize personality at the highest level, and so they are most helpful as a conceptual, organizing framework for regular, lower-level personality traits. However, because the Big Five traits are so broad and comprehensive, they are not nearly as powerful in predicting and explaining actual behavior as are the more numerous lower-level traits.

The Big five factors are Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism (OCEAN, or CANOE if rearranged). The Neuroticism factor is sometimes referred to as Emotional Stability. Some disagreement remains about how to interpret the Openness factor, which is sometimes called "Intelect". Each factor consists of a cluster of more specific traits that correlate together. For example, extroversion includes such related qualities as sociability, excitement seeking, impulsiveness, and positive emotions.

The Five Factor Model is a purely descriptive model of personality, but psychologists have developed a number of theories to account for the Big Five.

**Overview**

The Big Five factors and their constituent traits can be summarized as follows:

- **Openness** - (inventive / curious vs. cautious / conservative). Appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience.
- **Conscientiousness** - (efficient / organized vs. easy-going / careless). A tendency to show self-discipline, act dutifully, and aim for achievement; planned rather than spontaneous behavior.
- **Extraversion** - (outgoing / energetic vs. shy / withdrawn). Energy, positive emotions, urgency, and the tendency to seek stimulation in the company of others.
- **Agreeableness** - (friendly / compassionate vs. competitive / outspoken). A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.

- **Neuroticism** - (sensitive / nervous vs. secure / confident). A tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability.

When scored for individual feedback, these traits are frequently presented as percentile scores. For example, a Conscientiousness rating in the 80th percentile indicates a relatively strong sense of responsibility and orderliness, whereas an Extroversion rating in the 5th percentile indicates an exceptional need for solitude and quiet.

Although these trait clusters are statistical aggregates, exceptions may exist on individual personality profiles. On average, people who register high in Openness are intellectually curious, open to emotion, interested in art, and willing to try new things. A particular individual, however, may have a high overall Openness score and be interested in learning and exploring new cultures but have no great interest in art or poetry. Situational influences also exist, as even extroverts may occasionally need time away from people.

The most frequently used measures of the Big Five comprise either items that are self-descriptive sentences or, in the case of lexical measures, items that are single adjectives. Due to the length of sentence-based and some lexical measures, short forms have been developed and validated for use in applied research settings where questionnaire space and respondent time are limited, such as the 40-item balanced *International English Big-Five Mini-Markers* or a very brief (10 item) measure of the Big Five domains.
**Openness to Experience**

**Openness** is a general appreciation for art, emotion, adventure, unusual ideas, imagination, curiosity, and variety of experience. The trait distinguishes imaginative people from down-to-earth, conventional people. People who are open to experience are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be, compared to closed people, more creative and more aware of their feelings. They are more likely to hold unconventional beliefs.

People with low scores on openness tend to have more conventional, traditional interests. They prefer the plain, straightforward, and obvious over the complex, ambiguous, and subtle. They may regard the arts and sciences with suspicion, regarding these endeavors as uninteresting. Some self-statements pertaining to openness include:

**Sample Openness items**

- I have a rich vocabulary.
- I have a vivid imagination.
- I have excellent ideas.
- I spend time reflecting on things.
- I use difficult words.
- I am not interested in abstractions. *(reversed)*
- I do not have a good imagination. *(reversed)*
- I have difficulty understanding abstract ideas. *(reversed)*

**Conscientiousness**

**Conscientiousness** is a tendency to show self-discipline, act dutifully, and aim for achievement. The trait shows a preference for planned rather than spontaneous behavior. It influences the way in which we control, regulate, and direct our impulses. Conscientiousness includes the factor known as **Need for Achievement** (NAch).
Sample Conscientiousness items

- I am always prepared.
- I am exacting in my work.
- I follow a schedule.
- I get chores done right away.
- I like order.
- I pay attention to details.
- I leave my belongings around. (*reversed*)
- I make a mess of things. (*reversed*)
- I often forget to put things back in their proper place. (*reversed*)
- I shirk my duties. (*reversed*)

**Extroversion**

*Extroversion* is characterized by positive emotions, surgency, and the tendency to seek out stimulation and the company of others. The trait is marked by pronounced engagement with the external world. Extroverts enjoy being with people, and are often perceived as full of energy. They tend to be enthusiastic, action-oriented individuals who are likely to say "Yes!" or "Let's go!" to opportunities for excitement. In groups they like to talk, assert themselves, and draw attention to themselves.

Introverts lack the social exuberance and activity levels of extroverts. They tend to seem quiet, low-key, deliberate, and less involved in the social world. Their lack of social involvement should not be interpreted as shyness or depression. Introverts simply need less stimulation than extroverts and more time alone. They may be very active and energetic, simply not socially.

Sample Extroversion items

- I am the life of the party.
- I don't mind being the center of attention.
- I feel comfortable around people.
- I start conversations.
• I talk to a lot of different people at parties.
• I am quiet around strangers. (reversed)
• I don't like to draw attention to myself. (reversed)
• I don't talk a lot. (reversed)
• I have little to say. (reversed)

**Agreeableness**

**Agreeableness** is a tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others. The trait reflects individual differences in general concern for social harmony. Agreeable individuals value getting along with others. They are generally considerate, friendly, generous, helpful, and willing to compromise their interests with others. Agreeable people also have an optimistic view of human nature. They believe people are basically honest, decent, and trustworthy.

Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others’ well-being, and are less likely to extend themselves for other people. Sometimes their skepticism about others’ motives causes them to be suspicious, unfriendly, and uncooperative.

**Sample Agreeableness items**

• I am interested in people.
• I feel others’ emotions.
• I have a soft heart.
• I make people feel at ease.
• I sympathize with others’ feelings.
• I take time out for others.
• I am not interested in other people’s problems. (reversed)
• I am not really interested in others. (reversed)
• I feel little concern for others. (reversed)
• I insult people. (reversed)
• I like being isolated. (reversed)
**Neuroticism**

**Neuroticism** is the tendency to experience negative emotions, such as anger, anxiety, or depression. It is sometimes called emotional instability. Those who score high in neuroticism are emotionally reactive and vulnerable to stress. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish the ability of a person scoring high on neuroticism to think clearly, make decisions, and cope effectively with stress.

At the other end of the scale, individuals who score low in neuroticism are less easily upset and are less emotionally reactive. They tend to be calm, emotionally stable, and free from persistent negative feelings. Freedom from negative feelings does not mean that low scorers experience a lot of positive feelings.

**Sample Neuroticism items**

- I am easily disturbed.
- I change my mood a lot.
- I get irritated easily.
- I get stressed out easily.
- I get upset easily.
- I have frequent mood swings.
- I often feel blue.
- I worry about things.
- I am relaxed most of the time. (*reversed*)
- I seldom feel blue. (*reversed*)

**History**

*Early trait research*

Sir Francis Galton was the first scientist to recognize what is now known as the Lexical Hypothesis. This is the idea that the most salient and socially relevant personality differences in people’s lives will eventually become encoded into
language. The hypothesis further suggests that by sampling language, it is possible to derive a comprehensive taxonomy of human personality traits.

In 1936, Gordon Allport and H. S. Odbert put this hypothesis into practice. They worked through two of the most comprehensive dictionaries of the English language available at the time and extracted 17,953 personality-describing words. They then reduced this gigantic list to 4,504 adjectives which they believed were descriptive of observable and relatively permanent traits.

Raymond Cattell obtained the Allport-Odbert list in the 1940s, added terms obtained from psychological research, and then eliminated synonyms to reduce the total to 171. He then asked subjects to rate people whom they knew by the adjectives on the list and analyzed their ratings. Cattell identified 35 major clusters of personality traits which he referred to as the "personality sphere." He and his associates then constructed personality tests for these traits. The data they obtained from these tests were analyzed with the emerging technology of computers combined with the statistical method of factor analysis. This resulted in sixteen major personality factors, which led to the development of the 16PF Personality Questionnaire.

In 1961, two Air Force researchers, Ernest Tupes and Raymond Christal, analyzed personality data from eight large samples. Using Cattell's trait measures, they found five recurring factors, which they named "Surgency", "Agreeableness", "Dependability", "Emotional Stability", and "Culture". This work was replicated by Warren Norman, who also found that five major factors were sufficient to account for a large set of personality data. Norman named these factors Surgency, Agreeableness, Conscientiousness, Emotional Stability, and Culture. Raymond Cattell viewed these developments as an attack on his 16PF model and never agreed with the growing Five Factor consensus. He refers to "...the five factor heresy" which he considers "...is partly directed against the 16PF test". Responding to Goldberg's article in the American Psychologist, 'The Structure of Phenotypic Personality Traits', Cattell stated, "No experienced factorist could agree with Dr Goldberg's enthusiasm for the five factor personality theory". This determined rejection of the FFM challenge to his 16 factor model is presented in an article published towards the end of his life and

\textbf{Hiatus in research}

For the next two decades, the changing \textit{zeitgeist} made publication of personality research difficult. In his 1968 book \textit{Personality and Assessment}, Walter Mischel asserted that personality tests could not predict behavior with a correlation of more than 0.3. Social psychologists like Mischel argued that attitudes and behavior were not stable, but varied with the situation. Predicting behavior by personality tests was considered to be impossible. Radical situationists in the 1970s went so far as to argue that personality is merely a perceived construct that people impose on others in order to maintain an illusion of consistency in the world.

Emerging methodologies challenged this point of view during the 1980s. Instead of trying to predict single instances of behavior, which was unreliable, researchers found that they could predict patterns of behavior by aggregating large numbers of observations. As a result correlations between personality and behavior increased substantially, and it was clear that "personality" did in fact exist. Personality and social psychologists now generally agree that both personal and situational variables are needed to account for human behavior. Trait theories became justified, and there was a resurgence of interest in this area.

By 1980, the pioneering research by Tupes, Christal, and Norman had been largely forgotten by psychologists. Lewis Goldberg started his own lexical project, independently found the five factors once again, and gradually brought them back to the attention of psychologists. He later coined the term "Big Five" as a label for the factors.

\textbf{Validity of the Big Five}

In a 1981 symposium in Honolulu, four prominent researchers, Lewis Goldberg, Naomi Takemoto-Chock, Andrew Comrey, and John M. Digman, reviewed the available personality tests of the day. They concluded that the tests which held the most promise measured a subset of five common factors, just as Norman had
discovered in 1963. This event was followed by widespread acceptance of the five factor model among personality researchers during the 1980s. In 1984 Peter Saville and his team included the five-factor “Pentagon” model with the original OPQ. Pentagon was closely followed by the NEO five-factor personality inventory, published by Costa and McCrae in 1985.

One of the most significant advances of the five-factor model was the establishment of a common taxonomy that demonstrates order in a previously scattered and disorganized field. What separates the five-factor model of personality from all others is that it is not based on the theory of any one particular psychologist, but rather on language, the natural system that people use to communicate their understanding of one another.

A number of meta-analyses have confirmed the predictive value of the Big Five across a wide range of behaviors. Saulsman and Page examined the relationships between the Big Five personality dimensions and each of the 10 personality disorder categories in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Across 15 independent samples, the researchers found that each disorder displayed a unique and predictable five-factor profile. The most prominent and consistent personality predictors underlying the disorders were positive associations with Neuroticism and negative associations with Agreeableness.

In the area of job performance, Barrick and Mount reviewed 117 studies utilizing 162 samples with 23,994 participants. They found that conscientiousness showed consistent relations with all performance criteria for all occupational groups. Extroversion was a valid predictor for occupations involving social interaction (e.g. management and sales). Furthermore, extroversion and openness to experience were valid predictors of training proficiency criteria.

**Selected scientific findings**

Ever since the 1990s when the consensus of psychologists gradually came to support the Big Five, there has been a growing body of research surrounding these personality traits (see for instance, Robert Hogan's edited book "Handbook of Personality Psychology" (Academic Press, 1997).
Heritability

All five factors show an influence from both heredity and environment. Twin studies suggest that these effects contribute in roughly equal proportion. An analysis of the available studies found overall heritabilities for the Big Five traits as follows:

- Openness: 57%
- Conscientiousness: 49%
- Extroversion: 54%
- Agreeableness: 42%
- Neuroticism: 48%

Development

Many studies of longitudinal data, which correlate people's test scores over time, and cross-sectional data, which compare personality levels across different age groups, show a high degree of stability in personality traits during adulthood. More recent research and meta-analyses of previous studies, however, indicate that change occurs in all five traits at various points in the lifespan. The new research shows evidence for a maturation effect. On average, levels of Agreeableness and Conscientiousness typically increase with time, whereas Extroversion, Neuroticism, and Openness tend to decrease. In addition to these group effects, there are individual differences: different people demonstrate unique patterns of change at all stages of life.

Gender differences

Cross-cultural research from 26 nations (N = 23,031 subjects) and again in 55 nations (N = 17,637 subjects) has shown a universal pattern of sex differences on responses to the Big Five Inventory. Women consistently report higher Neuroticism and Agreeableness, and men often report higher Extroversion and Conscientiousness. Sex differences in personality traits are larger in prosperous, healthy, and egalitarian cultures in which women have more opportunities that are equal to those of men.

Birth order

The suggestion has often been made that individuals differ by the order of their births. Frank J. Sulloway argues that birth order is correlated with personality traits. He
claims that firstborns are more conscientious, more socially dominant, less agreeable, and less open to new ideas compared to laterborns.

However, Sulloway’s case has been called into question. One criticism is that his data confounds family size with birth order. Subsequent analyses have shown that birth order effects are only found in studies where the subjects’ personality traits are rated by family members (such as siblings or parents) or by acquaintances familiar with the subjects’ birth order. Large scale studies using random samples and self-report personality tests like the NEO PI-R have found no significant effect of birth order on personality.
Cross-cultural research

The Big Five have been replicated in a variety of different languages and cultures, such as German and Chinese. Thompson has demonstrated the Big Five structure across several cultures using an international English language scale.

Recent work has found relationships between Geert Hofstede’s cultural factors, Individualism, Power Distance, Masculinity, and Uncertainty Avoidance, with the average Big Five scores in a country. For instance, the degree to which a country values individualism correlates with its average Extroversion, while people living in cultures which are accepting of large inequalities in their power structures tend to score somewhat higher on Conscientiousness. The reasons for these differences are as yet unknown; this is an active area of research.

Non-humans

The big five personality factors have been assessed in some non-human species. In one series of studies, human ratings of chimpanzees using the Chimpanzee Personality Questionnaire (CPQ) revealed factors of extroversion, conscientiousness and agreeableness - as well as an additional factor of dominance - across hundreds of chimpanzees in zoological parks, a large naturalistic sanctuary and a research laboratory. Neuroticism and Openness factors were found in an original zoo sample, but did not replicate in a new zoo sample or to other settings (perhaps reflecting the design of the CPQ).

Criticisms

Much research has been conducted on the Big Five. This has resulted in both criticism and support for the model. Critics argue that there are limitations to the scope of Big Five as an explanatory or predictive theory. It is argued that the Big Five does not explain all of human personality. The methodology used to identify the dimensional structure of personality traits, factor analysis, is often challenged for not having a universally-recognized basis for choosing among solutions with different numbers of factors. Another frequent criticism is that the Big Five is not theory-driven. It is
merely a data-driven investigation of certain descriptors that tend to cluster together under factor analysis.

**Limited scope**

One common criticism is that the Big Five does not explain all of human personality. Some psychologists have dissented from the model precisely because they feel it neglects other domains of personality, such as Religiosity, Manipulativeness/Machiavellianism, Honesty, Thriftiness, Conservativeness, Masculinity/Femininity, Snobbishness, Sense of humour, Identity, Self-concept, and Motivation. Correlations have been found between some of these variables and the Big Five, such as the inverse relationship between political conservatism and Openness although variation in these traits is not well explained by the Five Factors themselves. McAdams has called the Big Five a "psychology of the stranger," because they refer to traits that are relatively easy to observe in a stranger; other aspects of personality that are more privately held or more context-dependent are excluded from the Big Five.

In many studies, the five factors are not fully orthogonal to one another; that is, the five factors are not independent. Negative correlations often appear between Neuroticism and Extroversion, for instance, indicating that those who are more prone to experiencing negative emotions tend to be less talkative and outgoing. Orthogonality is viewed as desirable by some researchers because it minimizes redundancy between the dimensions. This is particularly important when the goal of a study is to provide a comprehensive description of personality with as few variables as possible.

**Methodological issues**

The methodology used to identify the dimensional structure of personality traits, factor analysis, is often challenged for not having a universally-recognized basis for choosing among solutions with different numbers of factors. That is, a five factor solution depends on some degree of interpretation by the analyst. A larger number of factors may, in fact, underlie these five factors. This has led to disputes about the
"true" number of factors. Big Five proponents have responded that although other solutions may be viable in a single dataset, only the five factor structure consistently replicates across different studies.

A methodological criticism often directed at the Big Five is that much of the evidence relies on self report questionnaires; self report bias and falsification of responses is impossible to deal with completely. This becomes especially important when considering why scores may differ between individuals or groups of people - differences in scores may represent genuine underlying personality differences, or they may simply be an artifact of the way the subjects answered the questions. The five factor structure has been replicated in peer reports. However, many of the substantive findings rely on self-reports.

**Theoretical status**

A frequent criticism is that the Big Five is not based on any underlying theory; it is merely an empirical finding that certain descriptors cluster together under factor analysis. While this does not mean that these five factors don't exist, the underlying causes behind them are unknown. Sensation seeking and cheerfulness are not linked to Extroversion because of an underlying theory; this relationship is an empirical finding to be explained. Several overarching theoretical models have been proposed to cover all of the Big Five, such as Five-Factor Theory and Social Investment Theory. Temperament Theory may prove to provide a theoretical foundation for the Big Five, and provide a longitudinal (life-span) model in which the Big Five could be grounded.

**Psychodynamics**

**Psychodynamics** is the systematized study and theory of the psychological forces that underlie human behavior, emphasizing the interplay between unconscious and conscious motivation.

The original concept of "psychodynamics" was developed by Sigmund Freud. Freud suggested that psychological processes are flows of psychological energy in a complex brain, establishing "psychodynamics" on the basis of psychological energy, which he referred to as libido.
The psychodynamic psychotherapy is a less intensive form compared to classical psychoanalysis practiced by strict Freudians, demanding sessions only once weekly instead of 3-5 times weekly which was typical for traditional psychoanalysts.

Psychodynamic therapies depend on a theory of inner conflicts which surface in behaviour or emotions. Generally, one conflict is subconscious.
Overview

In general, psychodynamics, also known as dynamic psychology, is the study of the interrelationship of various parts of the mind, personality, or psyche as they relate to mental, emotional, or motivational forces especially at the unconscious level. The mental forces involved in psychodynamics are often divided into two parts: (a) interaction of emotional forces: the interaction of the emotional and motivational forces that affect behavior and mental states, especially on a subconscious level; (b) inner forces affecting behavior: the study of the emotional and motivational forces that affect behavior and states of mind;

Freud proposed that psychological energy was constant (hence, emotional changes consisted only in displacements) and that it tended to rest (point attractor) through discharge (catharsis).

In mate selection psychology, psychodynamics is defined as the study of the forces, motives, and energy generated by the deepest of human needs.

In general, psychodynamics studies the transformations and exchanges of "psychic energy" within the personality. A focus in psychodynamics is the connection between the energetics of emotional states in the id, ego, and superego as they relate to early childhood developments and processes. At the heart of psychological processes, according to Freud, is the ego, which he envisions as battling with three forces: the id, the super-ego, and the outside world. Hence, the basic psychodynamic model focuses on the dynamic interactions between the id, ego, and superego. Psychodynamics, subsequently, attempts to explain or interpret behavior or mental states in terms of innate emotional forces or processes.

History

Psychodynamics was initially developed by Ernst von Brücke, Sigmund Freud, Carl Jung, Alfred Adler and Melanie Klein. By the mid 1940s and into the 1950s, the general application of the "psychodynamic theory" had been well established.

In his 1988 book Introduction to Psychodynamics - a New Synthesis, psychologist Mardi J. Horowitz states that his own interest and fascination with psychodynamics
began during the 1950s, when he heard Ralph Greenson, a popular local psychoanalyst who spoke to the public on topics such as “People who Hate”, speak on the radio at UCLA. In his radio discussion, according to Horowitz, he “vividly described neurotic behavior and unconscious mental processes and linked psychodynamics theory directly to everyday life.”

In the 1950s, American psychiatrist Eric Berne built on Freud's psychodynamic model, particularly that of the "ego states", to develop a psychology of human interactions called transactional analysis which, according to physician James R. Allen, is a "cognitive behavioral approach to treatment and that it is a very effective way of dealing with internal models of self and others as well as other psychodynamic issues." The theory was popularized in the 1964 book *Games People Play*, a book that sold five million copies, giving way to such catch phrases as “Boy, has he got your number!”. 

**Freudian psychodynamics**

According to American psychologist Calvin S. Hall, from his 1954 *Primer in Freudian Psychology*:

“Freud greatly admired Brücke and quickly became indoctrinated by this new dynamic physiology. Thanks to Freud’s singular genius, he was to discover some twenty years later that the laws of dynamics could be applied to man’s personality as well as to his body. When he made his discovery Freud proceeded to create a dynamic psychology. A dynamic psychology is one that studies the transformations and exchanges of energy within the personality. This was Freud’s greatest achievement, and one of the greatest achievements in modern science, It is certainly a crucial event in the history of psychology.

At the heart of psychological processes, according to Freud, is the ego, which he sees battling with three forces: the id, the super-ego, and the outside world. Hence, the basic psychodynamic model focuses on the dynamic interactions between the id, ego, and superego. Psychodynamics, subsequently, attempts to explain or interpret
behavior or mental states in terms of innate emotional forces or processes. In his writings about the "engines of human behavior", Freud used the German word *Trieb*, a word that can be translated into English as either *instinct* or *drive*.

In the 1930s, Freud's daughter Anna Freud began to apply Freud's psychodynamic theories of the "ego" to the study of parent-child attachment and especially deprivation and in doing so developed ego psychology.

**Jungian psychodynamics**

At the turn of the 20th century, during these decisive years, a young Swiss psychiatrist named Carl Jung had been following Freud’s writings and had sent him copies of his articles and his first book, the 1907 *Psychology of Dementia Praecox*, in which he upheld the Freudian psychodynamic viewpoint, although with some reservations. That year, Freud invited Jung to visit him in Vienna. The two men, it is said, were greatly attracted to each other, and they talked continuously for thirteen hours. This led to a professional relationship in which they corresponded on a weekly basis, for a period of six years.

Carl Jung's contributions in psychodynamic psychology include:

1. The psyche tends toward wholeness.
2. The self is composed of the ego, the personal unconscious, the collective unconscious. The collective unconscious contains the archetypes which manifest in ways particular to each individual.
3. Archetypes are composed of dynamic tensions and arise spontaneously in the individual and collective psyche. Archetypes are autonomous energies common to the human species. They give the psyche its dynamic properties and help organize it. Their effects can be seen in many forms and across cultures.
4. The Transcendent Function: The emergence of the third resolves the split between dynamic polar tensions within the archetypal structure.
5. The recognition of the spiritual dimension of the human psyche.
6. The role of images which spontaneously arise in the human psyche (images include the interconnection between affect, images, and instinct) to
communicate the dynamic processes taking place in the personal and collective unconscious, images which can be used to help the ego move in the direction of psychic wholeness.

7. Recognition of the multiplicity of psyche and psychic life, that there are several organizing principles within the psyche, and that they are at times in conflict.
Positive psychology

In positive psychology, the psychodynamic conception of flow is defined as a conscious state of mind in harmonious order. In simple terms, it is a state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great costs, for the sake of doing it. In other words, in positive psychology, flow is a state of mental activity or operation in which the person is fully immersed in what he or she is doing, characterized by energized focus, full involvement, and success in the process of the activity.

The concept of flow in relation to mental contentment was developed by American psychologist Mihály Csíkszentmihályi who, beginning in the 1970s, interviewed and studied hundreds of successful people, such as musicians, athletes, artists, chess masters, and surgeons. In his studies, he made people wear “flow timers” in which at various randomized times during their workday a timer would go off and they document their flow state on paper. Among his many books on this subject, the pinnacle publication was the 1990 book *Flow – the Psychology of Optimal Experience*, which introduced the world to the psychological concept of flow and optimal experience. In this book, he states that “our perceptions about our lives are the outcome of many forces that shape our experience, each having an impact on whether we feel good or bad.”

Current

At present, psychodynamics is an evolving multi-disciplinary field which analyzes and studies human thought process, response patterns, and influences. Research in this field provides insights into a number of areas, including:

1. Understanding and anticipating the range of specific conscious and unconscious responses to specific sensory inputs, as images, colors, textures, sounds, etc.
2. Utilizing the communicative nature of movement and primal physiological gestures to affect and study specific mind-body states.
3. Examining the capacity for the mind and senses to directly affect physiological response and biological change.
In psychodynamic psychotherapy, patients become increasingly aware of dynamic conflicts and tensions that are manifesting as a symptom or challenge in their lives. Together with the clinician, patients are assisted to bring conflicting aspects of their self into awareness, and through time, begin to integrate the conflicting parts and resolve aspects of the tension. This is talked about in different ways in each of the psycho dynamic psychological theories, but all share the common goal of attempting to describe the dynamic nature of the tension between conflicting parts, assist the client in coming to terms with the tension, and begin the process of integration and healing.

- **Cognitive psychodynamics** is a blend of traditional psycho dynamic concepts with cognitive psychology and neuroscience, resulting in a relatively accessible and sensible theory of mental structure and function.

- In the 2003 book *Mapping the Organizational Psyche – a Jungian Theory of Organizational Dynamics*, psychologist John Corlett and author Carol Pearson develop a Jungian-style **organizational psychodynamics** allowing business leaders, in the midst of self-reflection and corporate restructuring, to “delve deeper into the corporate consciousness” so to better study the unconscious dynamics of organizational behavior in business.

### Nature versus nurture

The **nature versus nurture** debates concern the relative importance of an individual's innate qualities ("nature", i.e. nativism, or innatism) versus personal experiences ("nurture", i.e. empiricism or behaviorism) in determining or causing individual differences in physical and behavioral traits.

The view that humans acquire all or almost all their behavioral traits from "nurture" is known as **tabula rasa** ("blank slate"). This question was once considered to be an appropriate division of developmental influences, but since both types of factors are known to play such interacting roles in development, many modern psychologists consider the question naive - representing an outdated state of knowledge. Psychologist Donald Hebb is said to have once answered a journalist's question of
"which, nature or nurture, contributes more to personality?" by asking in response, "Which contributes more to the area of a rectangle, its length or its width?"

**Scientific approach**

In order to disentangle the effects of genes and environment, behavioral geneticists perform adoption and twin studies. Behavioral geneticists do not generally use the term "nurture" in order to explain that portion of the variance for a given trait (such as IQ or the Big Five personality traits) that can be attributed to environmental effects. Instead, two different types of environmental effects are distinguished: shared family factors (i.e., those shared by siblings, making them more similar) and nonshared factors (i.e., those that uniquely affect individuals, making siblings different). In order to express the portion of the variance that is due to the "nature" component, behavioral geneticists generally refer to the heritability of a trait.

With regard to the Big Five personality traits as well as adult IQ in the general U.S. population, the portion of the overall variance that can be attributed to shared family effects is often negligible. On the other hand, most traits are thought to be at least partially heritable. In this context, the "nature" component of the variance is generally thought to be more important than that ascribed to the influence of family upbringing.

In her Pulitzer Prize-nominated book *The Nurture Assumption*, author Judith Harris argues that "nurture," as traditionally defined in terms of family upbringing does not effectively explain the variance for most traits (such as adult IQ and the Big Five personality traits) in the general population of the United States. On the contrary, Harris suggests that either peer groups or random environmental factors (i.e., those that are independent of family upbringing) are more important than family environmental effects.

Although "nurture" has historically been referred to as the care given to children by the parents, with the mother playing a role of particular importance, this term is now regarded by some as any environmental (not genetic) factor in the contemporary *nature versus nurture* debate. Thus the definition of "nurture" has been expanded in order to include the influences on development arising from prenatal, parental, extended family and peer experiences, extending to influences such as media,
marketing, and socio-economic status. Indeed, a substantial source of environmental input to human nature may arise from stochastic variations in prenatal development.[13][14]

[edit] Heritability estimates

This chart illustrates three patterns one might see when studying the influence of genes and environment on traits in individuals. Trait A shows a high sibling correlation, but little heritability (i.e. high shared environmental variance $c^2$; low heritability $h^2$). Trait B shows a high heritability since correlation of trait rises sharply with degree of genetic similarity. Trait C shows low heritability, but also low correlations generally; this means Trait C has a high nonshared environmental variance $e^2$. In other words, the degree to which individuals display Trait C has little to do with either genes or broadly predictable environmental factors—roughly, the outcome approaches random for an individual. Notice also that even identical twins raised in a common family rarely show 100% trait correlation.

While there are many examples of single-gene-locus traits, current thinking in biology discredits the notion that genes alone can determine most complex traits. At the molecular level, DNA interacts with signals from other genes and from the environment. At the level of individuals, particular genes influence the development of a trait in the context of a particular environment. Thus, measurements of the degree to which a trait is influenced by genes versus environment will depend on the particular environment and genes examined. In many cases, it has been found that
genes may have a substantial contribution, including psychological traits such as intelligence and personality. Yet these traits may be largely influenced by environment in other circumstances, such as environmental deprivation.

A researcher seeking to quantify the influence of genes or environment on a trait needs to be able to separate the effects of one factor away from that of another. This kind of research often begins with attempts to calculate the heritability of a trait. Heritability quantifies the extent to which variation among individuals in a trait is due to variation in the genes those individuals carry. In animals where breeding and environments can be controlled experimentally, heritability can be determined relatively easily. Such experiments would be unethical for human research. This problem can be overcome by finding existing populations of humans that reflect the experimental setting the researcher wishes to create.

One way to determine the contribution of genes and environment to a trait is to study twins. In one kind of study, identical twins reared apart are compared to randomly selected pairs of people. The twins share identical genes, but different family environments. In another kind of twin study, identical twins reared together (who share family environment and genes) are compared to fraternal twins reared together (who also share family environment but only share half their genes). Another condition that permits the disassociation of genes and environment is adoption. In one kind of adoption study, biological siblings reared together (who share the same family environment and half their genes) are compared to adoptive siblings (who share their family environment but none of their genes).

Some have rightly pointed out that environmental inputs affect the expression of genes (see the article on epigenetics). This is one explanation of how environment can influence the extent to which a genetic disposition will actually manifest. The interactions of genes with environment, called gene-environment interaction, are another component of the nature-nurture debate. A classic example of gene-environment interaction is the ability of a diet low in the amino acid phenylalanine to partially suppress the genetic disease phenylketonuria. Yet another complication to the nature-nurture debate is the existence of gene-environment correlations. These correlations indicate that individuals with certain genotypes are
more likely to find themselves in certain environments. Thus, it appears that genes can shape (the selection or creation of) environments. Even using experiments like those described above, it can be very difficult to determine convincingly the relative contribution of genes and environment.
**Interaction of genes and environment**

In only a very few cases is it fair to say that a trait is due almost entirely to nature, or almost entirely to nurture.\footnote{citation needed} In the case of most diseases now strictly identified as genetic, such as Huntington's disease, there is a better than 99.9% correlation between having the identified gene and the disease and a similar correlation for not having either. On the other hand, Huntington's animal models live much longer or shorter lives depending on how they are cared for (animal husbandry). At the other extreme, traits such as native language are environmentally determined: linguists have found that any child (if capable of learning a language at all) can learn any human language with equal facility. With virtually all biological and psychological traits, however, genes and environment work in concert, communicating back and forth to create the individual.

Examples of environmental, interactional, and genetic traits are:

<table>
<thead>
<tr>
<th>Predominantly Environmental</th>
<th>Interactional</th>
<th>Predominantly Genetic</th>
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<tbody>
<tr>
<td>Specific language</td>
<td>Height</td>
<td>Blood type</td>
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<tr>
<td>Specific religion</td>
<td>Weight</td>
<td>Eye color</td>
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<td></td>
<td>Skin color</td>
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The "two buckets" view of heritability.

More realistic "homogenous mudpie" view of heritability.
Steven Pinker (2004) likewise described several examples:

concrete behavioral traits that patently depend on content provided by the home or culture —which language one speaks, which religion one practices, which political party one supports— are not heritable at all. But traits that reflect the underlying talents and temperaments —how proficient with language a person is, how religious, how liberal or conservative— are partially heritable.

When traits are determined by a complex interaction of genotype and environment it is possible to measure the heritability of a trait within a population. However, many non-scientists who encounter a report of a trait having a certain percentage heritability imagine non-interactional, additive contributions of genes and environment to the trait. As an analogy, some laypeople may think of the degree of a trait being made up of two "buckets", genes and environment, each able to hold a certain capacity of the trait. But even for intermediate heritabilities, a trait is always shaped by both genetic dispositions and the environments in which people develop, merely with greater and lesser plasticities associated with these heritability measures.

Heritability measures always refer to the degree of variation between individuals in a population. These statistics cannot be applied at the level of the individual. It is incorrect to say that since the heritability index of personality is about .6, you got 60% of your personality from your parents and 40% from the environment. To help to understand this, imagine that all humans were genetic clones. The heritability index for all traits would be zero (all variability between clonal individuals must be due to environmental factors). And, contrary to erroneous interpretations of the heritibility index, as societies become more egalitarian (everyone has more similar experiences) the heritability index goes up (as environments become more similar, variability between individuals is due more to genetic factors).

A highly genetically loaded trait (such as eye color) still assumes environmental input within normal limits (a certain range of temperature, oxygen in the atmosphere, etc.). A more useful distinction than "nature vs. nurture" is "obligate vs. facultative" — under typical environmental ranges, what traits are more "obligate" (e.g., the nose — everyone has a nose) or more "facultative" (sensitive to environmental variations,
such as specific language learned during infancy). Another useful distinction is between traits that are likely to be adaptations (such as the nose) and those that are byproducts of adaptations (such the white color of bones), or are due to random variation (non-adaptive variation in, say, nose shape or size).

**IQ debate**

Evidence suggests that family environmental factors may have an effect upon childhood IQ, accounting for up to a quarter of the variance. On the other hand, by late adolescence this correlation disappears, such that adoptive siblings are no more similar in IQ than strangers.

Moreover, adoption studies indicate that, by adulthood, adoptive siblings are no more similar in IQ than strangers (IQ correlation near zero), while full siblings show an IQ correlation of 0.6. Twin studies reinforce this pattern: monozygotic (identical) twins raised separately are highly similar in IQ (0.74), more so than dizygotic (fraternal) twins raised together (0.6) and much more than adoptive siblings (~0.0).

**Personality traits**

Personality is a frequently cited example of a heritable trait that has been studied in twins and adoptions. Identical twins reared apart are far more similar in personality than randomly selected pairs of people. Likewise, identical twins are more similar than fraternal twins. Also, biological siblings are more similar in personality than adoptive siblings. Each observation suggests that personality is heritable to a certain extent. However, these same study designs allow for the examination of environment as well as genes. Adoption studies also directly measure the strength of shared family effects. Adopted siblings share only family environment. Unexpectedly, some adoption studies indicate that by adulthood the personalities of adopted siblings are no more similar than random pairs of strangers. This would mean that shared family effects on personality are zero by adulthood. As is the case with personality, non-shared environmental effects are often found to out-weigh shared environmental effects. That is, environmental effects that are typically thought to be life-shaping (such as family life) may have less of an impact than non-shared effects, which are harder to identify. One possible source of non-shared effects is the environment of
pre-natal development. Random variations in the genetic program of development may be a substantial source of non-shared environment. These results suggest that "nurture" may not be the predominant factor in "environment".

**Advanced techniques**

The power of quantitative studies of heritable traits has been expanded by the development of new techniques. *Developmental genetic analysis* examines the effects of genes over the course of a human lifespan. For example, early studies of intelligence, which mostly examined young children, found heritability measures of 40 to 50 percent. Subsequent developmental genetic analyses have found that genetic contribution to intelligence increases over a lifespan, reaching a heritability of 80 percent in adulthood.

Another advanced technique, *multivariate genetic analysis*, examines the genetic contribution to several traits that vary together. For example, multivariate genetic analysis has demonstrated that the genetic determinants of all specific cognitive abilities (e.g., memory, spatial reasoning, processing speed) overlap greatly, such that the genes associated with any specific cognitive ability will affect all others. Similarly, multivariate genetic analysis has found that genes that affect scholastic achievement completely overlap with the genes that affect cognitive ability.

*Extremes analysis*, examines the link between normal and pathological traits. For example, it is hypothesized that a given behavioral disorder may represent an extreme of a continuous distribution of a normal behavior and hence an extreme of a continuous distribution of genetic and environmental variation. Depression, phobias, and reading disabilities have been examined in this context.

For highly heritable traits, it is now possible to search for individual genes that contribute to variation in that trait. For example, several research groups have identified genetic loci that contribute to schizophrenia (Harrison and Owen, 2003).
Moral difficulties

Some observers believe that modern science tends to give too much weight to the nature side of the argument, in part because of social consciousness. Historically, much of this debate has had undertones of racist and eugenicist policies — the notion of race as a scientific truth has often been assumed as a prerequisite in various incarnations of the nature versus nurture debate. In the past, heredity was often used as "scientific" justification for various forms of discrimination and oppression along racial and class lines. Works published in the United States since the 1960s that argue for the primacy of "nature" over "nurture" in determining certain characteristics, such as *The Bell Curve*, have been greeted with considerable controversy and scorn.

Philosophical difficulties

Are the traits real?

It is sometimes a question whether the "trait" being measured is even a real thing. Much energy has been devoted to calculating the heritability of intelligence (usually the I.Q., or intelligence quotient), but there is still some disagreement as to what exactly "intelligence" is.

Biological determinism

If genes do contribute substantially to the development of personal characteristics such as intelligence and personality, then many wonder if this implies that genes determine who we are. See Genetic determinism and Biological determinism.

Is the problem real?

Many scientists feel that the very question opposing nature to nurture is a fallacy. Already in 1951, Calvin Hall in his seminal chapter remarked that the discussion opposing nature and nurture was fruitless. If an environment is changed fundamentally, then the heritability of a character changes, too. Conversely, if the genetic composition of a population changes, then heritability will also change. As an example, we may use phenylketonuria (PKU), which causes brain damage and progressive mental retardation. PKU can be treated by the elimination of
phenylalanine from the diet. Hence, a character (PKU) that used to have a virtually perfect heritability is not heritable any more if modern medicine is available. Similarly, within, say, an inbred strain of mice, no genetic variation is present and every character will have a zero heritability. If the complications of gene-environment interactions and correlations (see above) are added, then it appears to many that heritability, the epitome of the nature-nurture opposition, is "a station passed".

Myths about identity

Within the debates surrounding cloning, for example, is the far-fetched contention that a Jesus or a Hitler could be "re-created" through genetic cloning. Current thinking finds this largely inaccurate, and discounts the possibility that the clone of anyone would grow up to be the same individual due to environmental variation. For example, like clones, identical twins are genetically identical, and unlike the hypothetical clones share the same family environment, yet they are not identical in personality and other traits.

History of the nature versus nurture debate

Traditionally, human nature has been thought of as not only inherited but divinely ordained. Whole ethnic groups were considered to be, by nature, superior or inferior. Since the late Middle Ages, intellectuals increasingly attributed differences among races, classes and genders to socialization (nurture), rather than to innate qualities (nature). In the 20th century, the Nazis pursued an agenda based on the concept of human nature as defined by one's race. The Communists, on the other hand, largely followed Marx's lead in defining the human identity as subject to social structures, not nature. In scientific circles, this conflict led to ongoing controversy of sociobiology and evolutionary psychology.  

Behaviorism
Behaviorism, also called the learning perspective, is a philosophy of psychology based on the proposition that all things that organisms do — including acting, thinking and feeling — can and should be regarded as behaviors. The school of psychology maintains that behaviors as such can be described scientifically without recourse either to internal physiological events or to hypothetical constructs such as the mind. Behaviorism comprises the position that all theories should have observational correlates but that there are no philosophical differences between publicly observable processes (such as actions) and privately observable processes (such as thinking and feeling).

From early psychology in the 19th century, the behaviorist school of thought ran concurrently and shared commonalities with the psychoanalytic and Gestalt movements in psychology into the 20th century; but also differed from the mental philosophy of the Gestalt psychologists in critical ways. Its main influences were Ivan Pavlov, who investigated classical conditioning, Edward Lee Thorndike, John B. Watson who rejected introspective methods and sought to restrict psychology to experimental methods, and B.F. Skinner who conducted research on operant conditioning.

In the second half of the twentieth century, behaviorism was largely eclipsed as a result of the cognitive revolution. Though these two schools of psychological thought may not agree theoretically, they have complemented each other in practical therapeutic applications. One notable legacy of behaviorist investigations is Cognitive-Behavioral Therapy, a popular treatment that uses cognitive models alongside behaviorist techniques such as 'systematic desensitization' and 'contingency management' that have demonstrable utility in helping people with certain pathologies, such as simple phobias, PTSD, and addiction.

Versions

There is no classification generally agreed upon, but some titles given to the various branches of behaviorism include:

- **Methodological**: The behaviorism of Watson; the objective study of behavior; no mental life, no internal states; thought is covert speech.
- **Radical**: Skinner's behaviorism; is considered radical since it expands behavioral principles to processes within the organism; in contrast to methodological behaviorism; not mechanistic or reductionist; hypothetical (mentalistic) internal states are not considered causes of behavior, phenomena must be observable at least to the individual experiencing them. Willard Van Orman Quine used many of radical behaviorism's ideas in his study of knowing and language.

- **Teleological**: Post-Skinnerian, purposive, close to microeconomics.

- **Theoretical**: Post-Skinnerian, accepts observable internal states ("within the skin" once meant "unobservable", but with modern technology we are not so constrained); dynamic, but eclectic in choice of theoretical structures, emphasizes parsimony.

- **Biological**: Post-Skinnerian, centered on perceptual and motor modules of behavior, theory of behavior systems.

- **Psychological behaviorism**: Arthur W. Staats' unifying approach to behaviorism and psychology. He merges psychological concepts like 'personality' within a behavioral model like BBR Basic Behavioral Repertoires.

Two popular subtypes are **Neo**: Hullian and post-Hullian, theoretical, group data, not dynamic, physiological, and **Purposive**: Tolman's behavioristic anticipation of cognitive psychology.

**Definition**

B.F. Skinner was influential in defining radical behaviorism, a philosophy codifying the basis of his school of research (named the Experimental Analysis of Behavior, or EAB.) While EAB differs from other approaches to behavioral research on numerous methodological and theoretical points, radical behaviorism departs from methodological behaviorism most notably in accepting feelings, states of mind and introspection as existent and scientifically treatable. This is done by identifying them as something non-dualistic, and here Skinner takes a divide-and-conquer approach, with some instances being identified with bodily conditions or behavior, and others getting a more extended 'analysis' in terms of behavior. However, radical behaviorism
stops short of identifying feelings as causes of behavior. Among other points of difference were a rejection of the reflex as a model of all behavior and a defense of a science of behavior complementary to but independent of physiology. Radical behaviorism has considerable overlap with other western philosophical positions such as American pragmatism.

**Experimental and conceptual innovations**

This essentially philosophical position gained strength from the success of Skinner's early experimental work with rats and pigeons, summarized in his books *The Behavior of Organisms* and *Schedules of Reinforcement*. Of particular importance was his concept of the operant response, of which the canonical example was the rat's lever-press. In contrast with the idea of a physiological or reflex response, an operant is a class of structurally distinct but functionally equivalent responses. For example, while a rat might press a lever with its left paw or its right paw or its tail, all of these responses operate on the world in the same way and have a common consequence. Operants are often thought of as species of responses, where the individuals differ but the class coheres in its function—shared consequences with operants and reproductive success with species. This is a clear distinction between Skinner's theory and S-R theory.

Skinner's empirical work expanded on earlier research on trial-and-error learning by researchers such as Thorndike and Guthrie with both conceptual reformulations – Thorndike's notion of a stimulus-response 'association' or 'connection' was abandoned; and methodological ones – the use of the 'free operant', so called because the animal was now permitted to respond at its own rate rather than in a series of trials determined by the experimenter procedures. With this method, Skinner carried out substantial experimental work on the effects of different schedules and rates of reinforcement on the rates of operant responses made by rats and pigeons. He achieved remarkable success in training animals to perform unexpected responses, and to emit large numbers of responses, and to demonstrate many empirical regularities at the purely behavioral level. This lent some credibility to his conceptual analysis. It is largely his conceptual analysis that made his work much more rigorous than his peers, a point which can be seen clearly in his seminal work *Are Theories of*
Learning Necessary? in which he criticizes what he viewed to be theoretical weaknesses then common in the study of psychology. An important descendant of the experimental analysis of behavior is the Society for Quantitative Analysis of Behavior.[7]

Relation to language

As Skinner turned from experimental work to concentrate on the philosophical underpinnings of a science of behavior, his attention turned to human language with Verbal Behavior and other language-related publications; Verbal Behavior laid out a vocabulary and theory for functional analysis of verbal behavior, and was strongly criticized in a review by Noam Chomsky. Skinner did not respond in detail but claimed that Chomsky failed to understand his ideas, and the disagreements between the two and the theories involved have been further discussed. In addition; innate theory is opposed the to behaviorist theory which claims that language is a set of habit that can be acquired by means of conditioning. According to some, this process that the behaviorists define is a very slow and gentle process to explain a phenomena complicated as language learning. What was important for a behaviorist's analysis of human behavior was not language acquisition so much as the interaction between language and overt behavior. In an essay republished in his 1969 book Contingencies of Reinforcement, Skinner took the view that humans could construct linguistic stimuli that would then acquire control over their behavior in the same way that external stimuli could. The possibility of such "instructional control" over behavior meant that contingencies of reinforcement would not always produce the same effects on human behavior as they reliably do in other animals. The focus of a radical behaviorist analysis of human behavior therefore shifted to an attempt to understand the interaction between instructional control and contingency control, and also to understand the behavioral processes that determine what instructions are constructed and what control they acquire over behavior. Recently a new, promising line of behavioral research on language was started under the name of Relational Frame Theory.

Molar versus molecular behaviorism
Skinner's view of behavior is most often characterized as a "molecular" view of behavior; that is, behavior can be decomposed into atomistic parts or molecules. This view is inconsistent with Skinner's complete description of behavior as delineated in other works, including his 1981 article "Selection by Consequences." Skinner proposed that a complete account of behavior requires understanding of selection history at three levels: biology (the natural selection or phylogeny of the animal); behavior (the reinforcement history or ontogeny of the behavioral repertoire of the animal); and for some species, culture (the cultural practices of the social group to which the animal belongs). This whole organism then interacts with its environment. Molecular behaviorists use notions from melioration theory, negative power function discounting or additive versions of negative power function discounting.

Molar behaviorists, such as Howard Rachlin, Richard Herrnstein, and William Baum, argue that behavior cannot be understood by focusing on events in the moment. That is, they argue that behavior is best understood as the ultimate product of an organism's history and that molecular behaviorists are committing a fallacy by inventing fictitious proximal causes for behavior. Molar behaviorists argue that standard molecular constructs, such as "associative strength," are better replaced by molar variables such as rate of reinforcement. Thus, a molar behaviorist would describe "loving someone" as a pattern of loving behavior over time; there is no isolated, proximal cause of loving behavior, only a history of behaviors (of which the current behavior might be an example) that can be summarized as "love."

**Behaviorism in philosophy**

Behaviorism is a psychological movement that can be contrasted with philosophy of mind. The basic premise of radical behaviorism is that the study of behavior should be a natural science, such as chemistry or physics, without any reference to hypothetical inner states of organisms as causes for their behavior. A modern example of such analysis would be Fantino and colleagues' work on behavioral approaches to reasoning. Other varieties, such as theoretical behaviorism, permit internal states, but do not require them to be mental or have any relation to subjective experience. Behaviorism takes a functional view of behavior.
There are points of view within analytic philosophy that have called themselves, or have been called by others, behaviorist. In logical behaviorism (as held, e.g., by Rudolf Carnap and Carl Hempel), the meaning of psychological statements are their verification conditions, which consist of performed overt behavior. W. V. Quine made use of a type of behaviorism, influenced by some of Skinner's ideas, in his own work on language. Gilbert Ryle defended a distinct strain of philosophical behaviorism, sketched in his book *The Concept of Mind*. Ryle's central claim was that instances of dualism frequently represented 'category mistakes,' and hence that they were really misunderstandings of the use of ordinary language. Daniel Dennett likewise acknowledges himself to be a type of behaviorist.

It is sometimes argued that Ludwig Wittgenstein defended a behaviorist position, but while there are important relations between his thought and behaviorism, the claim that he was a behaviorist is quite controversial (e.g., the *Beetle in a box* argument). Mathematician Alan Turing is also sometimes considered a behaviorist, but he himself did not make this identification.

**21st Century behavior analysis**

As of 2007, modern day behaviorism, known as "behavior analysis," is a thriving field. The Association for Behavior Analysis: International currently has 32 state and regional chapters within the United States. Approximately 30 additional chapters have also developed throughout Europe, Asia, South America, and Australia. In addition to 34 annual conferences held by ABAI in the United States and Canada, ABAI held the 5th annual International conference in Norway in 2009.

The interests among behavior analysts today are wide ranging, as a review of the 30 Special Interest Groups (SIGs) within ABAI indicates. Such interests include everything from developmental disabilities and autism, to cultural psychology, clinical psychology, verbal behavior, Organizational Behavior Management (OBM; behavior analytic I/O psychology). OBM has developed a particularly strong following within behavior analysis, as evidenced by the formation of the OBM Network and the influential Journal of Organizational Behavior Management (JOBM; recently ratest the 3rd highest impact journal in applied psychology by ISI JOBM rating).
Modern behavior analysis has also witnessed a massive resurgence in research and applications related to language and cognition, with the development of Relational Frame Theory (RFT; described as a "Post-Skinnerian account of language and cognition"). RFT also forms the empirical basis for the highly successful and data-driven Acceptance and Commitment Therapy (ACT). In fact, researchers and practitioners in RFT/ACT have become sufficiently prominent that they have formed their own specialized organization, known as the Association for Contextual Behavioral Science (ACBS).

Some of the current prominent behavior analytic journals include the Journal of Applied Behavior Analysis (JABA), the Journal of the Experimental Analysis of Behavior (JEAB) JEAB website, the Journal of Organizational Behavior Management (JOBM), Behavior and Social Issues (BSI) , as well as the Psychological Record. Currently, the U.S. has 14 ABAI accredited MA and PhD programs for comprehensive study in behavior analysis.

**Behavior Analysis and Culture**

During the 1980s, behavior analysts, most notably Sigrid Glenn, had a productive interchange with cultural anthropologist Marvin Harris (the most notable proponent of "Cultural Materialism") regarding interdisciplinary work. Very recently, behavior analysts have produced a set of basic exploratory experiments in an effort toward this end.
SIGMUND FREUD 1856 - 1939

It is a mistake to believe that a science consists in nothing but conclusively proved propositions, and it is unjust to demand that it should. It is a demand only made by those who feel a craving for authority in some form and a need to replace the religious catechism by something else, even if it be a scientific one. Science in its catechism has but few apodictic precepts; it consists mainly of statements which it has developed to varying degrees of probability. The capacity to be content with these approximations to certainty and the ability to carry on constructive work despite the lack of final confirmation are actually a mark of the scientific habit of mind. -- Freud

Freud's story, like most people's stories, begins with others. In his case those others were his mentor and friend, Dr. Joseph Breuer, and Breuer's patient, called Anna O.

Anna O. was Joseph Breuer's patient from 1880 through 1882. Twenty one years old, Anna spent most of her time nursing her ailing father. She developed a bad cough that proved to have no physical basis. She developed some speech difficulties, then became mute, and then began speaking only in English, rather than her usual German.

When her father died she began to refuse food, and developed an unusual set of problems. She lost the feeling in her hands and feet, developed some paralysis, and began to have involuntary spasms. She also had visual hallucinations and tunnel vision. But when specialists were consulted, no physical causes for these problems could be found.

If all this weren't enough, she had fairy-tale fantasies, dramatic mood swings, and made several suicide attempts. Breuer's diagnosis was that she was suffering from what was then called **hysteria** (now called conversion disorder), which meant she had symptoms that appeared to be physical, but were not.

In the evenings, Anna would sink into states of what Breuer called "spontaneous hypnosis," or what Anna herself called "clouds." Breuer found that, during these trance-like states, she could explain her day-time fantasies and other experiences, and she felt better afterwards. Anna called these episodes "chimney sweeping" and "the talking cure."
Sometimes during "chimney sweeping," some emotional event was recalled that gave meaning to some particular symptom. The first example came soon after she had refused to drink for a while: She recalled seeing a woman drink from a glass that a dog had just drunk from. While recalling this, she experienced strong feelings of disgust...and then had a drink of water! In other words, her symptom -- an avoidance of water -- disappeared as soon as she remembered its root event, and experienced the strong emotion that would be appropriate to that event. Breuer called this catharsis, from the Greek word for cleansing.

It was eleven years later that Breuer and his assistant, Sigmund Freud, wrote a book on hysteria. In it they explained their theory: Every hysteria is the result of a traumatic experience, one that cannot be integrated into the person's understanding of the world. The emotions appropriate to the trauma are not expressed in any direct fashion, but do not simply evaporate: They express themselves in behaviors that in a weak, vague way offer a response to the trauma. These symptoms are, in other words, meaningful. When the client can be made aware of the meanings of his or her symptoms (through hypnosis, for example) then the unexpressed emotions are released and so no longer need to express themselves as symptoms. It is analogous to lancing a boil or draining an infection.

In this way, Anna got rid of symptom after symptom. But it must be noted that she needed Breuer to do this: Whenever she was in one of her hypnotic states, she had to feel his hands to make sure it was him before talking! And sadly, new problems continued to arise.

According to Freud, Breuer recognized that she had fallen in love with him, and that he was falling in love with her. Plus, she was telling everyone she was pregnant with his child. You might say she wanted it so badly that her mind told her body it was true, and she developed an hysterical pregnancy. Breuer, a married man in a Victorian era, abruptly ended their sessions together, and lost all interest in hysteria.

It was Freud who would later add what Breuer did not acknowledge publicly -- that secret sexual desires lay at the bottom of all these hysterical neuroses.
To finish her story, Anna spent time in a sanatorium. Later, she became a well-respected and active figure -- the first social worker in Germany -- under her true name, Bertha Pappenheim. She died in 1936. She will be remembered, not only for her own accomplishments, but as the inspiration for the most influential personality theory we have ever had.

**Theory**

Freud didn't exactly invent the idea of the conscious versus unconscious mind, but he certainly was responsible for making it popular. The **conscious mind** is what you are aware of at any particular moment, your present perceptions, memories, thoughts, fantasies, feelings, what have you. Working closely with the conscious mind is what Freud called the **preconscious**, what we might today call "available memory:" anything that can easily be made conscious, the memories you are not at the moment thinking about but can readily bring to mind. Now no-one has a problem with these two layers of mind. But Freud suggested that these are the smallest parts!

The largest part by far is the **unconscious**. It includes all the things that are not easily available to awareness, including many things that have their origins there, such as our drives or instincts, and things that are put there because we can't bear to look at them, such as the memories and emotions associated with trauma.

According to Freud, the unconscious is the source of our motivations, whether they be simple desires for food or sex, neurotic compulsions, or the motives of an artist or scientist. And yet, we are often driven to deny or resist becoming conscious of these motives, and they are often available to us only in disguised form. We will come back to this.
The id, the ego, and the superego

Freudian psychological reality begins with the world, full of objects. Among them is a very special object, the organism. The organism is special in that it acts to survive and reproduce, and it is guided toward those ends by its needs -- hunger, thirst, the avoidance of pain, and sex.

A part -- a very important part -- of the organism is the nervous system, which has as one of its characteristics a sensitivity to the organism's needs. At birth, that nervous system is little more than that of any other animal, an "it" or id. The nervous system, as id, translates the organism's needs into motivational forces called, in German, Triebe, which has been translated as instincts or drives. Freud also called them wishes. This translation from need to wish is called the primary process.
The id works in keeping with the **pleasure principle**, which can be understood as a demand to take care of needs immediately. Just picture the hungry infant, screaming itself blue. It doesn't "know" what it wants in any adult sense; it just knows that it wants it and it wants it now. The infant, in the Freudian view, is pure, or nearly pure id. And the id is nothing if not the psychic representative of biology.

Unfortunately, although a wish for food, such as the image of a juicy steak, might be enough to satisfy the id, it isn't enough to satisfy the organism. The need only gets stronger, and the wishes just keep coming. You may have noticed that, when you haven't satisfied some need, such as the need for food, it begins to demand more and more of your attention, until there comes a point where you can't think of anything else. This is the wish or drive breaking into consciousness.

Luckily for the organism, there is that small portion of the mind we discussed before, the conscious, that is hooked up to the world through the senses. Around this little bit of consciousness, during the first year of a child's life, some of the "it" becomes "I," some of the id becomes **ego**. The ego relates the organism to reality by means of its consciousness, and it searches for objects to satisfy the wishes that id creates to represent the organisms needs. This problem-solving activity is called the **secondary process**.

The ego, unlike the id, functions according to the **reality principle**, which says "take care of a need as soon as an appropriate object is found." It represents reality and, to a considerable extent, reason.

However, as the ego struggles to keep the id (and, ultimately, the organism) happy, it meets with obstacles in the world. It occasionally meets with objects that actually assist it in attaining its goals. And it keeps a record of these obstacles and aides. In particular, it keeps track of the rewards and punishments meted out by two of the most influential objects in the world of the child -- mom and dad. This record of things to avoid and strategies to take becomes the **superego**. It is not completed until about seven years of age. In some people, it never is completed.

There are two aspects to the superego: One is the **conscience**, which is an internalization of punishments and warnings. The other is called the **ego ideal**. It
derives from rewards and positive models presented to the child. The conscience and ego ideal communicate their requirements to the ego with feelings like pride, shame, and guilt.

It is as if we acquired, in childhood, a new set of needs and accompanying wishes, this time of social rather than biological origins. Unfortunately, these new wishes can easily conflict with the ones from the id. You see, the superego represents society, and society often wants nothing better than to have you never satisfy your needs at all!

**Life instincts and the death instinct**

Freud saw all human behavior as motivated by the drives or instincts, which in turn are the neurological representations of physical needs. At first, he referred to them as the *life instincts*. These instincts perpetuate (a) the life of the individual, by motivating him or her to seek food and water, and (b) the life of the species, by motivating him or her to have sex. The motivational energy of these life instincts, the "oomph" that powers our psyches, he called *libido*, from the Latin word for "I desire."

Freud's clinical experience led him to view sex as much more important in the dynamics of the psyche than other needs. We are, after all, social creatures, and sex is the most social of needs. Plus, we have to remember that Freud included much more than intercourse in the term sex! Anyway, libido has come to mean, not any old drive, but the sex drive.

Later in his life, Freud began to believe that the life instincts didn't tell the whole story. Libido is a lively thing; the pleasure principle keeps us in perpetual motion. And yet the goal of all this motion is to be still, to be satisfied, to be at peace, to have no more needs. The goal of life, you might say, is death! Freud began to believe that "under" and "beside" the life instincts there was a *death instinct*. He began to believe that every person has an unconscious wish to die.

This seems like a strange idea at first, and it was rejected by many of his students, but I think it has some basis in experience: Life can be a painful and exhausting process. There is easily, for the great majority of people in the world, more pain than pleasure
in life -- something we are extremely reluctant to admit! Death promises release from the struggle.

Freud referred to a nirvana principle. Nirvana is a Buddhist idea, often translated as heaven, but actually meaning "blowing out," as in the blowing out of a candle. It refers to non-existence, nothingness, the void, which is the goal of all life in Buddhist philosophy.

The day-to-day evidence of the death instinct and its nirvana principle is in our desire for peace, for escape from stimulation, our attraction to alcohol and narcotics, our penchant for escapist activity, such as losing ourselves in books or movies, our craving for rest and sleep. Sometimes it presents itself openly as suicide and suicidal wishes. And, Freud theorized, sometimes we direct it out away from ourselves, in the form of aggression, cruelty, murder, and destructiveness.

Anxiety

Freud once said "life is not easy!"

The ego -- the 'I' -- sits at the center of some pretty powerful forces: reality; society, as represented by the superego; biology, as represented by the id. When these make conflicting demands upon the poor ego, it is understandable if it -- if you -- feel threatened, feel overwhelmed, feel as if it were about to collapse under the weight of it all. This feeling is called anxiety, and it serves as a signal to the ego that its survival, and with it the survival of the whole organism, is in jeopardy.

Freud mentions three different kind of anxieties: The first is realistic anxiety, which you and I would call fear. Actually Freud did, too, in German. But his translators thought "fear" too mundane! Nevertheless, if I throw you into a pit of poisonous snakes, you might experience realistic anxiety.

The second is moral anxiety. This is what we feel when the threat comes not from the outer, physical world, but from the internalized social world of the superego. It is, in fact, just another word for feelings like shame and guilt and the fear of punishment.
The last is **neurotic anxiety**. This is the fear of being overwhelmed by impulses from the id. If you have ever felt like you were about to "lose it," lose control, your temper, your rationality, or even your mind, you have felt neurotic anxiety. Neurotic is actually the Latin word for nervous, so this is nervous anxiety. It is this kind of anxiety that intrigued Freud most, and we usually just call it anxiety, plain and simple.

**The defense mechanisms**

The ego deals with the demands of reality, the id, and the superego as best as it can. But when the anxiety becomes overwhelming, the ego must defend itself. It does so by unconsciously blocking the impulses or distorting them into a more acceptable, less threatening form. The techniques are called the **ego defense mechanisms**, and Freud, his daughter Anna, and other disciples have discovered quite a few.

**Denial** involves blocking external events from awareness. If some situation is just too much to handle, the person just refuses to experience it. As you might imagine, this is a primitive and dangerous defense -- no one disregards reality and gets away with it for long! It can operate by itself or, more commonly, in combination with other, more subtle mechanisms that support it.

I was once reading while my five year old daughter was watching a cartoon (The Smurfs, I think). She was, as was her habit, quite close to the television, when a commercial came on. Apparently, no-one at the television station was paying much attention, because this was a commercial for a horror movie, complete with bloody knife, hockey mask, and screams of terror. Now I wasn't able to save my child from this horror, so I did what any good psychologist father would do: I talked about it. I said to her "Boy, that was a scary commercial, wasn't it?" She said "Huh?" I said "That commercial...it sure was scary wasn't it?" She said "What commercial?" I said "The commercial that was just on, with the blood and the mask and the screaming...!" She had apparently shut out the whole thing.

Since then, I've noticed little kids sort of glazing over when confronted by things they'd rather not be confronted by. I've also seen people faint at autopsies, people deny the reality of the death of a loved one, and students fail to pick up their test results. That's denial.
Anna Freud also mentions **denial in fantasy**: This is when children, in their imaginations, transform an "evil" father into a loving teddy bear, or a helpless child into a powerful superhero.

**Repression**, which Anna Freud also called "motivated forgetting," is just that: not being able to recall a threatening situation, person, or event. This, too, is dangerous, and is a part of most other defenses.

As an adolescent, I developed a rather strong fear of spiders, especially long-legged ones. I didn't know where it came from, but it was starting to get rather embarrassing by the time I entered college. At college, a counselor helped me to get over it (with a technique called systematic desensitization), but I still had no idea where it came from. Years later, I had a dream, a particularly clear one, that involved getting locked up by my cousin in a shed behind my grandparents' house when I was very young. The shed was small, dark, and had a dirt floor covered with -- you guessed it! -- long-legged spiders.

The Freudian understanding of this phobia is pretty simple: I repressed a traumatic event -- the shed incident -- but seeing spiders aroused the anxiety of the event without arousing the memory.

Other examples abound. Anna Freud provides one that now strikes us as quaint: A young girl, guilty about her rather strong sexual desires, tends to forget her boyfriend's name, even when trying to introduce him to her relations! Or an alcoholic can't remember his suicide attempt, claiming he must have "blacked out." Or when someone almost drowns as a child, but can't remember the event even when people try to remind him -- but he does have this fear of open water!

Note that, to be a true example of a defense, it should function unconsciously. My brother had a fear of dogs as a child, but there was no defense involved: He had been bitten by one, and wanted very badly never to repeat the experience! Usually, it is the irrational fears we call phobias that derive from repression of traumas.

**Asceticism**, or the renunciation of needs, is one most people haven't heard of, but it has become relevant again today with the emergence of the disorder called anorexia.
Preadolescents, when they feel threatened by their emerging sexual desires, may unconsciously try to protect themselves by denying, not only their sexual desires, but all desires. They get involved in some kind of ascetic (monk-like) lifestyle wherein they renounce their interest in what other people enjoy.

In boys nowadays, there is a great deal of interest in the self-discipline of the martial arts. Fortunately, the martial arts not only don't hurt you (much), they may actually help you. Unfortunately, girls in our society often develop a great deal of interest in attaining an excessively and artificially thin standard of beauty. In Freudian theory, their denial of their need for food is actually a cover for their denial of their sexual development. Our society conspires with them: After all, what most societies consider a normal figure for a mature woman is in ours considered 20 pounds overweight!

Anna Freud also discusses a milder version of this called restriction of ego. Here, a person loses interest in some aspect of life and focuses it elsewhere, in order to avoid facing reality. A young girl who has been rejected by the object of her affections may turn away from feminine things and become a "sex-less intellectual," or a boy who is afraid that he may be humiliated on the football team may unaccountably become deeply interested in poetry.

Isolation (sometimes called intellectualization) involves stripping the emotion from a difficult memory or threatening impulse. A person may, in a very cavalier manner, acknowledge that they had been abused as a child, or may show a purely intellectual curiosity in their newly discovered sexual orientation. Something that should be a big deal is treated as if it were not.

In emergency situations, many people find themselves completely calm and collected until the emergency is over, at which point they fall to pieces. Something tells you that, during the emergency, you can't afford to fall apart. It is common to find someone totally immersed in the social obligations surrounding the death of a loved one. Doctors and nurses must learn to separate their natural reactions to blood, wounds, needles, and scalpels, and treat the patient, temporarily, as something less than a warm, wonderful human being with friends and family. Adolescents often go through a stage where they are obsessed with horror movies, perhaps to come to grips
with their own fears. Nothing demonstrates isolation more clearly than a theater full of people laughing hysterically while someone is shown being dismembered.

**Displacement** is the redirection of an impulse onto a substitute target. If the impulse, the desire, is okay with you, but the person you direct that desire towards is too threatening, you can displace to someone or something that can serve as a symbolic substitute.

Someone who hates his or her mother may repress that hatred, but direct it instead towards, say, women in general. Someone who has not had the chance to love someone may substitute cats or dogs for human beings. Someone who feels uncomfortable with their sexual desire for a real person may substitute a fetish. Someone who is frustrated by his or her superiors may go home and kick the dog, beat up a family member, or engage in cross-burnings.

**Turning against the self** is a very special form of displacement, where the person becomes their own substitute target. It is normally used in reference to hatred, anger, and aggression, rather than more positive impulses, and it is the Freudian explanation for many of our feelings of inferiority, guilt, and depression. The idea that depression is often the result of the anger we refuse to acknowledge is accepted by many people, Freudians and non-Freudians alike.

Once upon a time, at a time when I was not feeling my best, my daughter, five years old, spilled an entire glass of chocolate milk in the living room. I lashed out at her verbally, telling her she was clumsy and had to learn to be more careful and how often hadn't I told her and...well, you know. She stood there stiffly with a sort of smoldering look in her eyes, and, of all things, pounded herself on her own head several times! Obviously, she would rather have pounded my head, but, well, you just don't do that, do you? Needless to say, I've felt guilty ever since.

**Projection**, which Anna Freud also called displacement outward, is almost the complete opposite of turning against the self. It involves the tendency to see your own unacceptable desires in other people. In other words, the desires are still there, but they're not your desires anymore. I confess that whenever I hear someone going on and on about how aggressive everybody is, or how perverted they all are, I tend to
wonder if this person doesn't have an aggressive or sexual streak in themselves that they'd rather not acknowledge.

Let me give you a couple of examples: A husband, a good and faithful one, finds himself terribly attracted to the charming and flirtatious lady next door. But rather than acknowledge his own, hardly abnormal, lusts, he becomes increasingly jealous of his wife, constantly worried about her faithfulness, and so on. Or a woman finds herself having vaguely sexual feelings about her girlfriends. Instead of acknowledging those feelings as quite normal, she becomes increasingly concerned with the presence of lesbians in her community.

**Altruistic surrender** is a form of projection that at first glance looks like its opposite: Here, the person attempts to fulfill his or her own needs vicariously, through other people.

A common example of this is the friend (we've all had one) who, while not seeking any relationship himself, is constantly pushing other people into them, and is particularly curious as to "what happened last night" and "how are things going?" The extreme example of altruistic surrender is the person who lives their whole life for and through another.

**Reaction formation**, which Anna Freud called "believing the opposite," is changing an unacceptable impulse into its opposite. So a child, angry at his or her mother, may become overly concerned with her and rather dramatically shower her with affection. An abused child may run to the abusing parent. Or someone who can't accept a homosexual impulse may claim to despise homosexuals.

Perhaps the most common and clearest example of reaction formation is found in children between seven and eleven or so: Most boys will tell you in no uncertain terms how disgusting girls are, and girls will tell you with equal vigor how gross boys are. Adults watching their interactions, however, can tell quite easily what their true feelings are!

**Undoing** involves "magical" gestures or rituals that are meant to cancel out unpleasant thoughts or feelings after they've already occurred. Anna Freud mentions,
for example, a boy who would recite the alphabet backwards whenever he had a 
sexual thought, or turn around and spit whenever meeting another boy who shared his 
passion for masturbation.

In "normal" people, the undoing is, of course, more conscious, and we might engage 
in an act of atonement for some behavior, or formally ask for forgiveness. But in 
some people, the act of atonement isn't conscious at all. Consider the alcoholic father 
who, after a year of verbal and perhaps physical abuse, puts on the best and biggest 
Christmas ever for his kids. When the season is over, and the kids haven't quite been 
fooled by his magical gesture, he returns to his bartender with complaints about how 
ungrateful his family is, and how they drive him to drink.

One of the classic examples of undoing concerns personal hygiene following sex: It is 
perfectly reasonable to wash up after sex. After all, it can get messy! But if you feel 
the need to take three or four complete showers using gritty soap -- perhaps sex 
doesn't quite agree with you.

**Introjection**, sometimes called identification, involves taking into your own 
personality characteristics of someone else, because doing so solves some emotional 
difficulty. For example, a child who is left alone frequently, may in some way try to 
become "mom" in order to lessen his or her fears. You can sometimes catch them 
telling their dolls or animals not to be afraid. And we find the older child or teenager 
imitating his or her favorite star, musician, or sports hero in an effort to establish an 
identity.

A more unusual example is a woman who lived next to my grandparents. Her husband 
had died and she began to dress in his clothes, albeit neatly tailored to her figure. She 
began to take up various of his habits, such as smoking a pipe. Although the 
neighbors found it strange and referred to her as "the man-woman," she was not 
suffering from any confusion about her sexual identity. In fact, she later remarried, 
retaining to the end her men's suits and pipe!

I must add here that identification is very important to Freudian theory as the 
mechanism by which we develop our superegos.
Identification with the aggressor is a version of introjection that focuses on the adoption, not of general or positive traits, but of negative or feared traits. If you are afraid of someone, you can partially conquer that fear by becoming more like them. Two of my daughters, growing up with a particularly moody cat, could often be seen meowing, hissing, spitting, and arching their backs in an effort to keep that cat from springing out of a closet or dark corner and trying to eat their ankles.

A more dramatic example is one called the Stockholm Syndrome. After a hostage crisis in Stockholm, psychologists were surprised to find that the hostages were not only not terribly angry at their captors, but often downright sympathetic. A more recent case involved a young woman named Patty Hearst, of the wealthy and influential Hearst family. She was captured by a very small group of self-proclaimed revolutionaries called the Symbionese Liberation Army. She was kept in closets, raped, and otherwise mistreated. Yet she apparently decided to join them, making little propaganda videos for them and even waving a machine gun around during a bank robbery. When she was later tried, psychologists strongly suggested she was a victim, not a criminal. She was nevertheless convicted of bank robbery and sentenced to 7 years in prison. Her sentence was commuted by President Carter after 2 years.

Regression is a movement back in psychological time when one is faced with stress. When we are troubled or frightened, our behaviors often become more childish or primitive. A child may begin to suck their thumb again or wet the bed when they need to spend some time in the hospital. Teenagers may giggle uncontrollably when introduced into a social situation involving the opposite sex. A freshman college student may need to bring an old toy from home. A gathering of civilized people may become a violent mob when they are led to believe their livelihoods are at stake. Or an older man, after spending twenty years at a company and now finding himself laid off, may retire to his recliner and become childishly dependent on his wife.

Where do we retreat when faced with stress? To the last time in life when we felt safe and secure, according to Freudian theory.

Rationalization is the cognitive distortion of "the facts" to make an event or an impulse less threatening. We do it often enough on a fairly conscious level when we provide ourselves with excuses. But for many people, with sensitive egos, making
excuses comes so easy that they never are truly aware of it. In other words, many of us are quite prepared to believe our lies.

A useful way of understanding the defenses is to see them as a combination of denial or repression with various kinds of rationalizations.

All defenses are, of course, lies, even if we are not conscious of making them. But that doesn't make them less dangerous -- in fact it makes them more so. As your grandma may have told you, "Oh what a tangled web we weave..." Lies breed lies, and take us further and further from the truth, from reality. After a while, the ego can no longer take care of the id's demands, or pay attention to the superego's. The anxieties come rushing back, and you break down.

And yet Freud saw defenses as necessary. You can hardly expect a person, especially a child, to take the pain and sorrow of life full on! While some of his followers suggested that all of the defenses could be used positively, Freud himself suggested that there was one positive defense, which he called sublimation.

**Sublimation** is the transforming of an unacceptable impulse, whether it be sex, anger, fear, or whatever, into a socially acceptable, even productive form. So someone with a great deal of hostility may become a hunter, a butcher, a football player, or a mercenary. Someone suffering from a great deal of anxiety in a confusing world may become an organizer, a businessperson, or a scientist. Someone with powerful sexual desires may become an artist, a photographer, or a novelist, and so on. For Freud, in fact, all positive, creative activities were sublimations, and predominantly of the sex drive.

**The stages**

As I said earlier, for Freud, the sex drive is the most important motivating force. In fact, Freud felt it was the primary motivating force not only for adults but for children and even infants. When he introduced his ideas about infantile sexuality to the Viennese public of his day, they were hardly prepared to talk about sexuality in adults, much less in infants!
It is true that the capacity for orgasm is there neurologically from birth. But Freud was not just talking about orgasm. Sexuality meant not only intercourse, but all pleasurable sensation from the skin. It is clear even to the most prudish among us that babies, children, and, of course, adults, enjoy tactile experiences such as caresses, kisses, and so on.

Freud noted that, at different times in our lives, different parts of our skin give us greatest pleasure. Later theorists would call these areas **erogenous zones**. It appeared to Freud that the infant found its greatest pleasure in sucking, especially at the breast. In fact, babies have a penchant for bringing nearly everything in their environment into contact with their mouths. A bit later in life, the child focuses on the anal pleasures of holding it in and letting go. By three or four, the child may have discovered the pleasure of touching or rubbing against his or her genitalia. Only later, in our sexual maturity, do we find our greatest pleasure in sexual intercourse. In these observations, Freud had the makings of a psychosexual stage theory.

The **oral stage** lasts from birth to about 18 months. The focus of pleasure is, of course, the mouth. Sucking and biting are favorite activities.

The **anal stage** lasts from about 18 months to three or four years old. The focus of pleasure is the anus. Holding it in and letting it go are greatly enjoyed.

The **phallic stage** lasts from three or four to five, six, or seven years old. The focus of pleasure is the genitalia. Masturbation is common.

The **latent stage** lasts from five, six, or seven to puberty, that is, somewhere around 12 years old. During this stage, Freud believed that the sexual impulse was suppressed in the service of learning. I must note that, while most children seem to be fairly calm, sexually, during their grammar school years, perhaps up to a quarter of them are quite busy masturbating and playing "doctor." In Freud's repressive era, these children were, at least, quieter than their modern counterparts.

The **genital stage** begins at puberty, and represents the resurgence of the sex drive in adolescence, and the more specific focusing of pleasure in sexual intercourse. Freud
felt that masturbation, oral sex, homosexuality, and many other things we find acceptable in adulthood today, were immature.

This is a true stage theory, meaning that Freudians believe that we all go through these stages, in this order, and pretty close to these ages.

**The Oedipal crisis**

Each stage has certain difficult tasks associated with it where problems are more likely to arise. For the oral stage, this is weaning. For the anal stage, it's potty training. For the phallic stage, it is the Oedipal crisis, named after the ancient Greek story of king Oedipus, who inadvertently killed his father and married his mother.

Here's how the Oedipal crisis works: The first love-object for all of us is our mother. We want her attention, we want her affection, we want her caresses, we want her, in a broadly sexual way. The young boy, however, has a rival for his mother's charms: his father! His father is bigger, stronger, smarter, and he gets to sleep with mother, while junior pines away in his lonely little bed. Dad is the enemy.

About the time the little boy recognizes this archetypal situation, he has become aware of some of the more subtle differences between boys and girls, the ones other than hair length and clothing styles. From his naive perspective, the difference is that he has a penis, and girls do not. At this point in life, it seems to the child that having something is infinitely better than not having something, and so he is pleased with this state of affairs.

But the question arises: where is the girl's penis? Perhaps she has lost it somehow. Perhaps it was cut off. Perhaps this could happen to him! This is the beginning of **castration anxiety**, a slight misnomer for the fear of losing one's penis.

To return to the story, the boy, recognizing his father's superiority and fearing for his penis, engages some of his ego defenses: He displaces his sexual impulses from his mother to girls and, later, women; And he identifies with the aggressor, dad, and attempts to become more and more like him, that is to say, a man. After a few years of latency, he enters adolescence and the world of mature heterosexuality.
The girl also begins her life in love with her mother, so we have the problem of getting her to switch her affections to her father before the Oedipal process can take place. Freud accomplishes this with the idea of **penis envy**: The young girl, too, has noticed the difference between boys and girls and feels that she, somehow, doesn't measure up. She would like to have one, too, and all the power associated with it. At very least, she would like a penis substitute, such as a baby. As every child knows, you need a father as well as a mother to have a baby, so the young girl sets her sights on dad.

Dad, of course, is already taken. The young girl displaces from him to boys and men, and identifies with mom, the woman who got the man she really wanted. Note that one thing is missing here: The girl does not suffer from the powerful motivation of castration anxiety, since she cannot lose what she doesn't have. Freud felt that the lack of this great fear accounts for the fact (as he saw it) that women were both less firmly heterosexual than men and somewhat less morally-inclined.

Before you get too upset by this less-than-flattering account of women's sexuality, rest assured that many people have responded to it. I will discuss it in the discussion section.

**Character**

Your experiences as you grow up contribute to your personality, or character, as an adult. Freud felt that traumatic experiences had an especially strong effect. Of course, each specific trauma would have its own unique impact on a person, which can only be explored and understood on an individual basis. But traumas associated with stage development, since we all have to go through them, should have more consistency.

If you have difficulties in any of the tasks associated with the stages -- weaning, potty training, or finding your sexual identity -- you will tend to retain certain infantile or childish habits. This is called **fixation**. Fixation gives each problem at each stage a long-term effect in terms of our personality or character.

If you, in the first eight months of your life, are often frustrated in your need to suckle, perhaps because mother is uncomfortable or even rough with you, or tries to
Wean you too early, then you may develop an *oral-passive character*. An oral-passive personality tends to be rather dependent on others. They often retain an interest in "oral gratifications" such as eating, drinking, and smoking. It is as if they were seeking the pleasures they missed in infancy.

When we are between five and eight months old, we begin teething. One satisfying thing to do when you are teething is to bite on something, like mommy's nipple. If this causes a great deal of upset and precipitates an early weaning, you may develop an *oral-aggressive personality*. These people retain a life-long desire to bite on things, such as pencils, gum, and other people. They have a tendency to be verbally aggressive, argumentative, sarcastic, and so on.

In the anal stage, we are fascinated with our "bodily functions." At first, we can go whenever and wherever we like. Then, out of the blue and for no reason you can understand, the powers that be want you to do it only at certain times and in certain places. And parents seem to actually value the end product of all this effort!

Some parents put themselves at the child's mercy in the process of toilet training. They beg, they cajole, they show great joy when you do it right, they act as though their hearts were broken when you don't. The child is the king of the house, and knows it. This child will grow up to be an *anal expulsive* (a.k.a. anal aggressive) *personality*. These people tend to be sloppy, disorganized, generous to a fault. They may be cruel, destructive, and given to vandalism and graffiti. The Oscar Madison character in *The Odd Couple* is a nice example.

Other parents are strict. They may be competing with their neighbors and relatives as to who can potty train their child first (early potty training being associated in many people's minds with great intelligence). They may use punishment or humiliation. This child will likely become constipated as he or she tries desperately to hold it in at all times, and will grow up to be an *anal retentive personality*. He or she will tend to be especially clean, perfectionistic, dictatorial, very stubborn, and stingy. In other words, the anal retentive is tight in all ways. The Felix Unger character in *The Odd Couple* is a perfect example.
There are also two **phallic personalities**, although no-one has given them names. If the boy is harshly rejected by his mother, and rather threatened by his very masculine father, he is likely to have a poor sense of self-worth when it comes to his sexuality. He may deal with this by either withdrawing from heterosexual interaction, perhaps becoming a book-worm, or by putting on a rather macho act and playing the ladies' man. A girl rejected by her father and threatened by her very feminine mother is also likely to feel poorly about herself, and may become a wall-flower or a hyper-feminine "belle."

But if a boy is not rejected by his mother, but rather favored over his weak, milquetoast father, he may develop quite an opinion of himself (which may suffer greatly when he gets into the real world, where nobody loves him like his mother did), and may appear rather effeminate. After all, he has no cause to identify with his father. Likewise, if a girl is daddy's little princess and best buddy, and mommy has been relegated to a sort of servant role, then she may become quite vain and self-centered, or possibly rather masculine.

These various phallic characters demonstrate an important point in Freudian characterology: Extremes lead to extremes. If you are frustrated in some way or overindulged in some way, you have problems. And, although each problem tends to lead to certain characteristics, these characteristics can also easily be reversed. So an anal retentive person may suddenly become exceedingly generous, or may have some part of their life where they are terribly messy. This is frustrating to scientists, but it may reflect the reality of personality!

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**Therapy**

Freud's therapy has been more influential than any other, and more influential than any other part of his theory. Here are some of the major points:

**Relaxed atmosphere.** The client must feel free to express anything. The therapy situation is in fact a unique social situation, one where you do not have to be afraid of social judgment or ostracism. In fact, in Freudian therapy, the therapist practically
disappears. Add to that the physically relaxing couch, dim lights, sound-proof walls, and the stage is set.

**Free association.** The client may talk about anything at all. The theory is that, with relaxation, the unconscious conflicts will inevitably drift to the fore. It isn't far off to see a similarity between Freudian therapy and dreaming! However, in therapy, there is the therapist, who is trained to recognize certain clues to problems and their solutions that the client would overlook.

**Resistance.** One of these clues is resistance. When a client tries to change the topic, draws a complete blank, falls asleep, comes in late, or skips an appointment altogether, the therapist says "aha!" These resistances suggest that the client is nearing something in his free associations that he -- unconsciously, of course -- finds threatening.

**Dream analysis.** In sleep, we are somewhat less resistant to our unconscious and we will allow a few things, in symbolic form, of course, to come to awareness. These wishes from the id provide the therapist and client with more clues. Many forms of therapy make use of the client's dreams, but Freudian interpretation is distinct in the tendency to find sexual meanings.

**Parapraxes.** A parapraxis is a slip of the tongue, often called a Freudian slip. Freud felt that they were also clues to unconscious conflicts. Freud was also interested in the jokes his clients told. In fact, Freud felt that almost everything meant something almost all the time -- dialing a wrong number, making a wrong turn, misspelling a word, were serious objects of study for Freud. However, he himself noted, in response to a student who asked what his cigar might be a symbol for, that "sometimes a cigar is just a cigar." Or is it?

Other Freudians became interested in **projective tests**, such as the famous Rorschach or inkblot tests. The theory behind these test is that, when the stimulus is vague, the client fills it with his or her own unconscious themes. Again, these could provide the therapist with clues.

**Transference, catharsis, and insight**
Transference occurs when a client projects feelings toward the therapist that more legitimately belong with certain important others. Freud felt that transference was necessary in therapy in order to bring the repressed emotions that have been plaguing the client for so long, to the surface. You can't feel really angry, for example, without a real person to be angry at. The relationship between the client and the therapist, contrary to popular images, is very close in Freudian therapy, although it is understood that it can't get out of hand.

Catharsis is the sudden and dramatic outpouring of emotion that occurs when the trauma is resurrected. The box of tissues on the end table is not there for decoration.

Insight is being aware of the source of the emotion, of the original traumatic event. The major portion of the therapy is completed when catharsis and insight are experienced. What should have happened many years ago -- because you were too little to deal with it, or under too many conflicting pressures -- has now happened, and you are on your way to becoming a happier person.

Freud said that the goal of therapy is simply "to make the unconscious conscious."

Sexuality

A more general criticism of Freud's theory is its emphasis on sexuality. Everything, both good and bad, seems to stem from the expression or repression of the sex drive. Many people question that, and wonder if there are any other forces at work. Freud himself later added the death instinct, but that proved to be another one of his less popular ideas.

First let me point out that, in fact, a great deal of our activities are in some fashion motivated by sex. If you take a good hard look at our modern society, you will find that most advertising uses sexual images, that movies and television programs often don't sell well if they don't include some titillation, that the fashion industry is based on a continual game of sexual hide-and-seek, and that we all spend a considerable portion of every day playing "the mating game." Yet we still don't feel that all life is sexual.
But Freud's emphasis on sexuality was not based on the great amount of obvious sexuality in his society -- it was based on the intense avoidance of sexuality, especially among the middle and upper classes, and most especially among women. What we too easily forget is that the world has changed rather dramatically over the last hundred years. We forget that doctors and ministers recommended strong punishment for masturbation, that "leg" was a dirty word, that a woman who felt sexual desire was automatically considered a potential prostitute, that a bride was often taken completely by surprise by the events of the wedding night, and could well faint at the thought.

It is to Freud's credit that he managed to rise above his culture's sexual attitudes. Even his mentor Breuer and the brilliant Charcot couldn't fully acknowledge the sexual nature of their clients' problems. Freud's mistake was more a matter of generalizing too far, and not taking cultural change into account. It is ironic that much of the cultural change in sexual attitudes was in fact due to Freud's work!

**The unconscious**

One last concept that is often criticized is the unconscious. It is not argued that something like the unconscious accounts for some of our behavior, but rather how much and the exact nature of the beast.

Behaviorists, humanists, and existentialists all believe that (a) the motivations and problems that can be attributed to the unconscious are much fewer than Freud thought, and (b) the unconscious is not the great churning cauldron of activity he made it out to be. Most psychologists today see the unconscious as whatever we don't need or don't want to see. Some theorists don't use the concept at all.

On the other hand, at least one theorist, Carl Jung, proposed an unconscious that makes Freud's look puny! But we will leave all these views for the appropriate chapters.

**Positive aspects**

People have the unfortunate tendency to "throw the baby out with the bath water." If they don't agree with ideas a, b, and c, they figure x, y, and z must be wrong as well.
But Freud had quite a few good ideas, so good that they have been incorporated into many other theories, to the point where we forget to give him credit.

First, Freud made us aware of two powerful forces and their demands on us. Back when everyone believed people were basically rational, he showed how much of our behavior was based on biology. When everyone conceived of people as individually responsible for their actions, he showed the impact of society. When everyone thought of male and female as roles determined by nature or God, he showed how much they depended on family dynamics. The id and the superego -- the psychic manifestations of biology and society -- will always be with us in some form or another.

Second is the basic theory, going back to Breuer, of certain neurotic symptoms as caused by psychological traumas. Although most theorists no longer believe that all neurosis can be so explained, or that it is necessary to relive the trauma to get better, it has become a common understanding that a childhood full of neglect, abuse, and tragedy tends to lead to an unhappy adult.

Third is the idea of ego defenses. Even if you are uncomfortable with Freud's idea of the unconscious, it is clear that we engage in little manipulations of reality and our memories of that reality to suit our own needs, especially when those needs are strong. I would recommend that you learn to recognize these defenses: You will find that having names for them will help you to notice them in yourself and others!

Finally, the basic form of therapy has been largely set by Freud. Except for some behaviorist therapies, most therapy is still "the talking cure," and still involves a physically and socially relaxed atmosphere. And, even if other theorists do not care for the idea of transference, the highly personal nature of the therapeutic relationship is generally accepted as important to success.

Some of Freud's ideas are clearly tied to his culture and era. Other ideas are not easily testable. Some may even be a matter of Freud's own personality and experiences. But Freud was an excellent observer of the human condition, and enough of what he said has relevance today that he will be a part of personality textbooks for years to come. Even when theorists come up with dramatically different ideas about how we work, they compare their ideas with Freud's.
One of the many interesting things Maslow noticed while he worked with monkeys early in his career, was that some needs take precedence over others. For example, if you are hungry and thirsty, you will tend to try to take care of the thirst first. After all, you can do without food for weeks, but you can only do without water for a couple of days! Thirst is a “stronger” need than hunger. Likewise, if you are very very thirsty, but someone has put a choke hold on you and you can’t breath, which is more important? The need to breathe, of course. On the other hand, sex is less powerful than any of these. Let’s face it, you won’t die if you don’t get it!

Maslow took this idea and created his now famous hierarchy of needs. Beyond the details of air, water, food, and sex, he laid out five broader layers: the physiological needs, the needs for safety and security, the needs for love and belonging, the needs for esteem, and the need to actualize the self, in that order.

1. **The physiological needs.** These include the needs we have for oxygen, water, protein, salt, sugar, calcium, and other minerals and vitamins. They also include the need to maintain a pH balance (getting too acidic or base will kill you) and temperature (98.6 or near to it). Also, there’s the needs to be active, to rest, to sleep, to get rid of wastes (CO2, sweat, urine, and feces), to avoid pain, and to have sex. Quite a collection!
Maslow believed, and research supports him, that these are in fact individual needs, and that a lack of, say, vitamin C, will lead to a very specific hunger for things which have in the past provided that vitamin C -- e.g. orange juice. I guess the cravings that some pregnant women have, and the way in which babies eat the most foul tasting baby food, support the idea anecdotally.

2. **The safety and security needs.** When the physiological needs are largely taken care of, this second layer of needs comes into play. You will become increasingly interested in finding safe circumstances, stability, protection. You might develop a need for structure, for order, some limits.

Looking at it negatively, you become concerned, not with needs like hunger and thirst, but with your fears and anxieties. In the ordinary American adult, this set of needs manifest themselves in the form of our urges to have a home in a safe neighborhood, a little job security and a nest egg, a good retirement plan and a bit of insurance, and so on.

3. **The love and belonging needs.** When physiological needs and safety needs are, by and large, taken care of, a third layer starts to show up. You begin to feel the need for friends, a sweetheart, children, affectionate relationships in general, even a sense of community. Looked at negatively, you become increasingly susceptible to loneliness and social anxieties.

In our day-to-day life, we exhibit these needs in our desires to marry, have a family, be a part of a community, a member of a church, a brother in the fraternity, a part of a gang or a bowling club. It is also a part of what we look for in a career.

4. **The esteem needs.** Next, we begin to look for a little self-esteem. Maslow noted two versions of esteem needs, a lower one and a higher one. The lower one is the need for the respect of others, the need for status, fame, glory, recognition, attention, reputation, appreciation, dignity, even dominance. The higher form involves the need for self-respect, including such feelings as confidence, competence, achievement, mastery, independence, and freedom. Note that this is the “higher” form because, unlike the respect of others, once you have self-respect, it’s a lot harder to lose!
The negative version of these needs is low self-esteem and inferiority complexes. Maslow felt that Adler was really onto something when he proposed that these were at the roots of many, if not most, of our psychological problems. In modern countries, most of us have what we need in regard to our physiological and safety needs. We, more often than not, have quite a bit of love and belonging, too. It’s a little respect that often seems so very hard to get!

All of the preceding four levels he calls deficit needs, or D-needs. If you don’t have enough of something -- i.e. you have a deficit -- you feel the need. But if you get all you need, you feel nothing at all! In other words, they cease to be motivating. As the old blues song goes, “you don’t miss your water till your well runs dry!”

He also talks about these levels in terms of homeostasis. Homeostasis is the principle by which your furnace thermostat operates: When it gets too cold, it switches the heat on; When it gets too hot, it switches the heat off. In the same way, your body, when it lacks a certain substance, develops a hunger for it; When it gets enough of it, then the hunger stops. Maslow simply extends the homeostatic principle to needs, such as safety, belonging, and esteem, that we don’t ordinarily think of in these terms.

Maslow sees all these needs as essentially survival needs. Even love and esteem are needed for the maintenance of health. He says we all have these needs built in to us genetically, like instincts. In fact, he calls them instinctoid -- instinct-like -- needs.

In terms of overall development, we move through these levels a bit like stages. As newborns, our focus (if not our entire set of needs) is on the physiological. Soon, we begin to recognize that we need to be safe. Soon after that, we crave attention and...
affection. A bit later, we look for self-esteem. Mind you, this is in the first couple of years!

Under stressful conditions, or when survival is threatened, we can “regress” to a lower need level. When you great career falls flat, you might seek out a little attention. When your family ups and leaves you, it seems that love is again all you ever wanted. When you face chapter eleven after a long and happy life, you suddenly can’t think of anything except money.

These things can occur on a society-wide basis as well: When society suddenly flounders, people start clamoring for a strong leader to take over and make things right. When the bombs start falling, they look for safety. When the food stops coming into the stores, their needs become even more basic.

Maslow suggested that we can ask people for their “philosophy of the future” -- what would their ideal life or world be like -- and get significant information as to what needs they do or do not have covered.

If you have significant problems along your development -- a period of extreme insecurity or hunger as a child, or the loss of a family member through death or divorce, or significant neglect or abuse -- you may “fixate” on that set of needs for the rest of your life.

This is Maslow’s understanding of neurosis. Perhaps you went through a war as a kid. Now you have everything your heart needs -- yet you still find yourself obsessing over having enough money and keeping the pantry well-stocked. Or perhaps your parents divorced when you were young. Now you have a wonderful spouse -- yet you
get insanely jealous or worry constantly that they are going to leave you because you are not “good enough” for them. You get the picture.

**Self-actualization**

The last level is a bit different. Maslow has used a variety of terms to refer to this level: He has called it *growth motivation* (in contrast to deficit motivation), *being needs* (or *B-needs*, in contrast to *D-needs*), and *self-actualization*.

These are needs that do not involve balance or homeostasis. Once engaged, they continue to be felt. In fact, they are likely to become stronger as we “feed” them! They involve the continuous desire to fulfill potentials, to “be all that you can be.”

They are a matter of becoming the most complete, the fullest, “you” -- hence the term, self-actualization.

Now, in keeping with his theory up to this point, if you want to be truly self-actualizing, you need to have your lower needs taken care of, at least to a considerable extent. This makes sense: If you are hungry, you are scrambling to get food; If you are unsafe, you have to be continuously on guard; If you are isolated and unloved, you have to satisfy that need; If you have a low sense of self-esteem, you have to be defensive or compensate. When lower needs are unmet, you can’t fully devote yourself to fulfilling your potentials.

It isn’t surprising, then, the world being as difficult as it is, that only a small percentage of the world’s population is truly, predominantly, self-actualizing. Maslow at one point suggested only about two percent!

The question becomes, of course, what exactly does Maslow mean by self-actualization. To answer that, we need to look at the kind of people he called self-actualizers. Fortunately, he did this for us, using a qualitative method called *biographical analysis*.

He began by picking out a group of people, some historical figures, some people he knew, whom he felt clearly met the standard of self-actualization. Included in this august group were Abraham Lincoln, Thomas Jefferson, Albert Einstein, Eleanor Roosevelt, Jane Adams, William James, Albert Schweitzer, Benedict Spinoza, and
Alduous Huxley, plus 12 unnamed people who were alive at the time Maslow did his research. He then looked at their biographies, writings, the acts and words of those he knew personally, and so on. From these sources, he developed a list of qualities that seemed characteristic of these people, as opposed to the great mass of us.

These people were reality-centered, which means they could differentiate what is fake and dishonest from what is real and genuine. They were problem-centered, meaning they treated life’s difficulties as problems demanding solutions, not as personal troubles to be railed at or surrendered to. And they had a different perception of means and ends. They felt that the ends don’t necessarily justify the means, that the means could be ends themselves, and that the means -- the journey -- was often more important than the ends.

The self-actualizers also had a different way of relating to others. First, they enjoyed solitude, and were comfortable being alone. And they enjoyed deeper personal relations with a few close friends and family members, rather than more shallow relationships with many people.

They enjoyed autonomy, a relative independence from physical and social needs. And they resisted enculturation, that is, they were not susceptible to social pressure to be "well adjusted" or to "fit in" -- they were, in fact, nonconformists in the best sense.

They had an unhostile sense of humor -- preferring to joke at their own expense, or at the human condition, and never directing their humor at others. They had a quality he called acceptance of self and others, by which he meant that these people would be more likely to take you as you are than try to change you into what they thought you should be. This same acceptance applied to their attitudes towards themselves: If some quality of theirs wasn’t harmful, they let it be, even enjoying it as a personal quirk. On the other hand, they were often strongly motivated to change negative qualities in themselves that could be changed. Along with this comes spontaneity and simplicity: They preferred being themselves rather than being pretentious or artificial. In fact, for all their nonconformity, he found that they tended to be conventional on the surface, just where less self-actualizing nonconformists tend to be the most dramatic.
Further, they had a sense of humility and respect towards others -- something Maslow also called democratic values -- meaning that they were open to ethnic and individual variety, even treasuring it. They had a quality Maslow called human kinship or Gemeinschaftsgefühl -- social interest, compassion, humanity. And this was accompanied by a strong ethics, which was spiritual but seldom conventionally religious in nature.

And these people had a certain freshness of appreciation, an ability to see things, even ordinary things, with wonder. Along with this comes their ability to be creative, inventive, and original. And, finally, these people tended to have more peak experiences than the average person. A peak experience is one that takes you out of yourself, that makes you feel very tiny, or very large, to some extent one with life or nature or God. It gives you a feeling of being a part of the infinite and the eternal. These experiences tend to leave their mark on a person, change them for the better, and many people actively seek them out. They are also called mystical experiences, and are an important part of many religious and philosophical traditions.

Maslow doesn’t think that self-actualizers are perfect, of course. There were several flaws or imperfections he discovered along the way as well: First, they often suffered considerable anxiety and guilt -- but realistic anxiety and guilt, rather than misplaced or neurotic versions. Some of them were absentminded and overly kind. And finally, some of them had unexpected moments of ruthlessness, surgical coldness, and loss of humor.

Two other points he makes about these self-actualizers: Their values were "natural" and seemed to flow effortlessly from their personalities. And they appeared to transcend many of the dichotomies others accept as being undeniable, such as the differences between the spiritual and the physical, the selfish and the unselfish, and the masculine and the feminine.

**Metaneeds and metapathologies**

Another way in which Maslow approach the problem of what is self-actualization is to talk about the special, driving needs (B-needs, of course) of the self-actualizers. They need the following in their lives in order to be happy:
Truth, rather than dishonesty.

Goodness, rather than evil.

Beauty, not ugliness or vulgarity.

Unity, wholeness, and transcendence of opposites, not arbitrariness or forced choices.

Aliveness, not deadness or the mechanization of life.

Uniqueness, not bland uniformity.

Perfection and necessity, not sloppiness, inconsistency, or accident.

Completion, rather than incompleteness.

Justice and order, not injustice and lawlessness.

Simplicity, not unnecessary complexity.

Richness, not environmental impoverishment.

Effortlessness, not strain.

Playfulness, not grim, humorless, drudgery.

Self-sufficiency, not dependency.

Meaningfulness, rather than senselessness.

At first glance, you might think that everyone obviously needs these. But think: If you are living through an economic depression or a war, or are living in a ghetto or in rural poverty, do you worry about these issues, or do you worry about getting enough to eat and a roof over your head? In fact, Maslow believes that much of the what is wrong with the world comes down to the fact that very few people really are interested in these values -- not because they are bad people, but because they haven’t even had their basic needs taken care of!

When a self-actualizer doesn’t get these needs fulfilled, they respond with metapathologies -- a list of problems as long as the list of metaneeds! Let me summarize it by saying that, when forced to live without these values, the self-actualizer develops depression, despair, disgust, alienation, and a degree of cynicism.

Maslow hoped that his efforts at describing the self-actualizing person would eventually lead to a “periodic table” of the kinds of qualities, problems, pathologies, and even solutions characteristic of higher levels of human potential. Over time, he
devoted increasing attention, not to his own theory, but to humanistic psychology and the human potentials movement.

Toward the end of his life, he inaugurated what he called the **fourth force** in psychology: Freudian and other “depth” psychologies constituted the first force; Behaviorism was the second force; His own humanism, including the European existentialists, were the third force. The fourth force was the **transpersonal psychologies** which, taking their cue from Eastern philosophies, investigated such things as meditation, higher levels of consciousness, and even parapsychological phenomena. Perhaps the best known transpersonalist today is Ken Wilber, author of such books as *The Atman Project* and *The History of Everything*.

**CARL JUNG 1875 - 1961**

Anyone who wants to know the human psyche will learn next to nothing from experimental psychology. He would be better advised to abandon exact science, put away his scholar's gown, bid farewell to his study, and wander with human heart throught the world. There in the horrors of prisons, lunatic asylums and hospitals, in drab suburban pubs, in brothels and gambling-hells, in the salons of the elegant, the Stock Exchanges, socialist meetings, churches, revivalist gatherings and ecstatic sects, through love and hate, through the experience of passion in every form in his own body, he would reap richer stores of knowledge than text-books a foot thick could give him, and he will know how to doctor the sick with a real knowledge of the human soul. -- Carl Jung

Freud said that the goal of therapy was to make the unconscious conscious. He certainly made that the goal of his work as a theorist. And yet he makes the unconscious sound very unpleasant, to say the least: It is a cauldron of seething desires, a bottomless pit of perverse and incestuous cravings, a burial ground for frightening experiences which nevertheless come back to haunt us. Frankly, it doesn't sound like anything I'd like to make conscious!

A younger colleague of his, Carl Jung, was to make the exploration of this "inner space" his life's work. He went equipped with a background in Freudian theory, of course, and with an apparently inexhaustible knowledge of mythology, religion, and
philosophy. Jung was especially knowledgeable in the symbolism of complex mystical traditions such as Gnosticism, Alchemy, Kabala, and similar traditions in Hinduism and Buddhism. If anyone could make sense of the unconscious and its habit of revealing itself only in symbolic form, it would be Carl Jung.

He had, in addition, a capacity for very lucid dreaming and occasional visions. In the fall of 1913, he had a vision of a "monstrous flood" engulfing most of Europe and lapping at the mountains of his native Switzerland. He saw thousands of people drowning and civilization crumbling. Then, the waters turned into blood. This vision was followed, in the next few weeks, by dreams of eternal winters and rivers of blood. He was afraid that he was becoming psychotic.

But on August 1 of that year, World War I began. Jung felt that there had been a connection, somehow, between himself as an individual and humanity in general that could not be explained away. From then until 1928, he was to go through a rather painful process of self-exploration that formed the basis of all of his later theorizing.

He carefully recorded his dreams, fantasies, and visions, and drew, painted, and sculpted them as well. He found that his experiences tended to form themselves into persons, beginning with a wise old man and his companion, a little girl. The wise old man evolved, over a number of dreams, into a sort of spiritual guru. The little girl became "anima," the feminine soul, who served as his main medium of communication with the deeper aspects of his unconscious.

A leathery brown dwarf would show up guarding the entrance to the unconscious. He was "the shadow," a primitive companion for Jung's ego. Jung dreamt that he and the dwarf killed a beautiful blond youth, whom he called Siegfried. For Jung, this represented a warning about the dangers of the worship of glory and heroism which would soon cause so much sorrow all over Europe -- and a warning about the dangers of some of his own tendencies towards hero-worship, of Sigmund Freud!

Jung dreamt a great deal about the dead, the land of the dead, and the rising of the dead. These represented the unconscious itself -- not the "little" personal unconscious that Freud made such a big deal out of, but a new collective unconscious of humanity itself, an unconscious that could contain all the dead, not just our personal ghosts.
Jung began to see the mentally ill as people who are haunted by these ghosts, in an age where no-one is supposed to even believe in them. If we could only recapture our mythologies, we would understand these ghosts, become comfortable with the dead, and heal our mental illnesses.

Critics have suggested that Jung was, very simply, ill himself when all this happened. But Jung felt that, if you want to understand the jungle, you can't be content just to sail back and forth near the shore. You've got to get into it, no matter how strange and frightening it might seem.

**Theory**

Jung's theory divides the psyche into three parts. The first is the **ego**, which Jung identifies with the conscious mind. Closely related is the **personal unconscious**, which includes anything which is not presently conscious, but can be. The personal unconscious is like most people's understanding of the unconscious in that it includes both memories that are easily brought to mind and those that have been suppressed for some reason. But it does not include the instincts that Freud would have it include.

But then Jung adds the part of the psyche that makes his theory stand out from all others: the **collective unconscious**. You could call it your "psychic inheritance." It is the reservoir of our experiences as a species, a kind of knowledge we are all born with. And yet we can never be directly conscious of it. It influences all of our experiences and behaviors, most especially the emotional ones, but we only know about it indirectly, by looking at those influences.

There are some experiences that show the effects of the collective unconscious more clearly than others: The experiences of love at first sight, of deja vu (the feeling that you've been here before), and the immediate recognition of certain symbols and the meanings of certain myths, could all be understood as the sudden conjunction of our outer reality and the inner reality of the collective unconscious. Grander examples are the creative experiences shared by artists and musicians all over the world and in all times, or the spiritual experiences of mystics of all religions, or the parallels in dreams, fantasies, mythologies, fairy tales, and literature.
A nice example that has been greatly discussed recently is the near-death experience. It seems that many people, of many different cultural backgrounds, find that they have very similar recollections when they are brought back from a close encounter with death. They speak of leaving their bodies, seeing their bodies and the events surrounding them clearly, of being pulled through a long tunnel towards a bright light, of seeing deceased relatives or religious figures waiting for them, and of their disappointment at having to leave this happy scene to return to their bodies. Perhaps we are all "built" to experience death in this fashion.

**Archetypes**

The contents of the collective unconscious are called **archetypes**. Jung also called them dominants, imagos, mythological or primordial images, and a few other names, but archetypes seems to have won out over these. An archetype is an unlearned tendency to experience things in a certain way.

The archetype has no form of its own, but it acts as an "organizing principle" on the things we see or do. It works the way that instincts work in Freud's theory: At first, the baby just wants something to eat, without knowing what it wants. It has a rather indefinite yearning which, nevertheless, can be satisfied by some things and not by others. Later, with experience, the child begins to yearn for something more specific when it is hungry -- a bottle, a cookie, a broiled lobster, a slice of New York style pizza.

The archetype is like a black hole in space: You only know its there by how it draws matter and light to itself.

**The mother archetype**

The **mother archetype** is a particularly good example. All of our ancestors had mothers. We have evolved in an environment that included a mother or mother-substitute. We would never have survived without our connection with a nurturing-one during our times as helpless infants. It stands to reason that we
are "built" in a way that reflects that evolutionary environment: We come into this world ready to want mother, to seek her, to recognize her, to deal with her.

So the mother archetype is our built-in ability to recognize a certain relationship, that of "mothering." Jung says that this is rather abstract, and we are likely to project the archetype out into the world and onto a particular person, usually our own mothers. Even when an archetype doesn't have a particular real person available, we tend to personify the archetype, that is, turn it into a mythological "story-book" character. This character symbolizes the archetype.

The mother archetype is symbolized by the primordial mother or "earth mother" of mythology, by Eve and Mary in western traditions, and by less personal symbols such as the church, the nation, a forest, or the ocean. According to Jung, someone whose own mother failed to satisfy the demands of the archetype may well be one that spends his or her life seeking comfort in the church, or in identification with "the motherland," or in meditating upon the figure of Mary, or in a life at sea.

**Mana**

You must understand that these archetypes are not really biological things, like Freud's instincts. They are more spiritual demands. For example, if you dreamt about long things, Freud might suggest these things represent the phallus and ultimately sex. But Jung might have a very different interpretation. Even dreaming quite specifically about a penis might not have much to do with some unfulfilled need for sex.

It is curious that in primitive societies, phallic symbols do not usually refer to sex at all. They usually symbolize mana, or spiritual power. These symbols would be displayed on occasions when the spirits are being called upon to increase the yield of corn, or fish, or to heal someone. The connection between the penis and strength, between semen and seed, between fertilization and fertility are understood by most cultures.

**The shadow**

Sex and the life instincts in general are, of course, represented somewhere in Jung's system. They are a part of an archetype called the shadow. It derives from our
prehuman, animal past, when our concerns were limited to survival and reproduction, and when we weren't self-conscious.

It is the "dark side" of the ego, and the evil that we are capable of is often stored there. Actually, the shadow is amoral -- neither good nor bad, just like animals. An animal is capable of tender care for its young and vicious killing for food, but it doesn't choose to do either. It just does what it does. It is "innocent." But from our human perspective, the animal world looks rather brutal, inhuman, so the shadow becomes something of a garbage can for the parts of ourselves that we can't quite admit to.

Symbols of the shadow include the snake (as in the garden of Eden), the dragon, monsters, and demons. It often guards the entrance to a cave or a pool of water, which is the collective unconscious. Next time you dream about wrestling with the devil, it may only be yourself you are wrestling with!

The persona

The persona represents your public image. The word is, obviously, related to the word person and personality, and comes from a Latin word for mask. So the persona is the mask you put on before you show yourself to the outside world. Although it begins as an archetype, by the time we are finished realizing it, it is the part of us most distant from the collective unconscious.

At its best, it is just the "good impression" we all wish to present as we fill the roles society requires of us. But, of course, it can also be the "false impression" we use to manipulate people's opinions and behaviors. And, at its worst, it can be mistaken, even by ourselves, for our true nature: Sometimes we believe we really are what we pretend to be!

Anima and animus
A part of our persona is the role of male or female we must play. For most people that role is determined by their physical gender. But Jung, like Freud and Adler and others, felt that we are all really bisexual in nature. When we begin our lives as fetuses, we have undifferentiated sex organs that only gradually, under the influence of hormones, become male or female. Likewise, when we begin our social lives as infants, we are neither male nor female in the social sense. Almost immediately -- as soon as those pink or blue booties go on -- we come under the influence of society, which gradually molds us into men and women.

In all societies, the expectations placed on men and women differ, usually based on our different roles in reproduction, but often involving many details that are purely traditional. In our society today, we still have many remnants of these traditional expectations. Women are still expected to be more nurturant and less aggressive; men are still expected to be strong and to ignore the emotional side of life. But Jung felt these expectations meant that we had developed only half of our potential.

The anima is the female aspect present in the collective unconscious of men, and the animus is the male aspect present in the collective unconscious of women. Together, they are referred to as syzygy. The anima may be personified as a young girl, very spontaneous and intuitive, or as a witch, or as the earth mother. It is likely to be associated with deep emotionality and the force of life itself. The animus may be personified as a wise old man, a sorcerer, or often a number of males, and tends to be logical, often rationalistic, even argumentative.

The anima or animus is the archetype through which you communicate with the collective unconscious generally, and it is important to get into touch with it. It is also the archetype that is responsible for much of our love life: We are, as an ancient Greek myth suggests, always looking for our other half, the half that the Gods took from us, in members of the opposite sex. When we fall in love at first sight, then we have found someone that "fills" our anima or animus archetype particularly well!

Other archetypes
Jung said that there is no fixed number of archetypes which we could simply list and memorize. They overlap and easily melt into each other as needed, and their logic is not the usual kind. But here are some he mentions:

Besides mother, there are other family archetypes. Obviously, there is father, who is often symbolized by a guide or an authority figure. There is also the archetype family, which represents the idea of blood relationship and ties that run deeper than those based on conscious reasons.

There is also the child, represented in mythology and art by children, infants most especially, as well as other small creatures. The Christ child celebrated at Christmas is a manifestation of the child archetype, and represents the future, becoming, rebirth, and salvation. Curiously, Christmas falls during the winter solstice, which in northern primitive cultures also represents the future and rebirth. People used to light bonfires and perform ceremonies to encourage the sun's return to them. The child archetype often blends with other archetypes to form the child-god, or the child-hero.

Many archetypes are story characters. The hero is one of the main ones. He is the mana personality and the defeater of evil dragons. Basically, he represents the ego -- we do tend to identify with the hero of the story -- and is often engaged in fighting the shadow, in the form of dragons and other monsters. The hero is, however, often dumb as a post. He is, after all, ignorant of the ways of the collective unconscious. Luke Skywalker, in the Star Wars films, is the perfect example of a hero.

The hero is often out to rescue the maiden. She represents purity, innocence, and, in all likelihood, naivete. In the beginning of the Star Wars story, Princess Leia is the maiden. But, as the story progresses, she becomes the anima, discovering the powers of the force -- the collective unconscious -- and becoming an equal partner with Luke, who turns out to be her brother.

The hero is guided by the wise old man. He is a form of the animus, and reveals to the hero the nature of the collective unconscious. In Star Wars, he is played by Obi Wan Kenobi and, later, Yoda. Notice that they teach Luke about the force and, as Luke matures, they die and become a part of him.
You might be curious as to the archetype represented by Darth Vader, the "dark father." He is the shadow and the master of the dark side of the force. He also turns out to be Luke and Leia's father. When he dies, he becomes one of the wise old men.

There is also an **animal** archetype, representing humanity's relationships with the animal world. The hero's faithful horse would be an example. Snakes are often symbolic of the animal archetype, and are thought to be particularly wise. Animals, after all, are more in touch with their natures than we are. Perhaps loyal little robots and reliable old spaceships -- the Falcon-- are also symbols of animal.

And there is the **trickster**, often represented by a clown or a magician. The trickster's role is to hamper the hero's progress and to generally make trouble. In Norse mythology, many of the gods' adventures originate in some trick or another played on their majesties by the half-god Loki.

There are other archetypes that are a little more difficult to talk about. One is the **original man**, represented in western religion by Adam. Another is the **God** archetype, representing our need to comprehend the universe, to give a meaning to all that happens, to see it all as having some purpose and direction.

The **hermaphrodite**, both male and female, represents the union of opposites, an important idea in Jung's theory. In some religious art, Jesus is presented as a rather feminine man. Likewise, in China, the character Kuan Yin began as a male saint (the bodhisattva Avalokiteshvara), but was portrayed in such a feminine manner that he is more often thought of as the female goddess of compassion!

The most important archetype of all is the **self**. The self is the ultimate unity of the personality and is symbolized by the circle, the cross, and the **mandala** figures that Jung was fond of painting. A mandala is a drawing that is used in meditation because it tends to draw your focus back to the center, and it can be as simple as a geometric figure or as complicated as a stained glass window. The personifications that best represent self
are Christ and Buddha, two people who many believe achieved perfection. But Jung felt that perfection of the personality is only truly achieved in death.

**The dynamics of the psyche**

So much for the content of the psyche. Now let's turn to the principles of its operation. Jung gives us three principles, beginning with the **principle of opposites**. Every wish immediately suggests its opposite. If I have a good thought, for example, I cannot help but have in me somewhere the opposite bad thought. In fact, it is a very basic point: In order to have a concept of good, you must have a concept of bad, just like you can't have up without down or black without white.

This idea came home to me when I was about eleven. I occasionally tried to help poor innocent woodland creatures who had been hurt in some way -- often, I'm afraid, killing them in the process. Once I tried to nurse a baby robin back to health. But when I picked it up, I was so struck by how light it was that the thought came to me that I could easily crush it in my hand. Mind you, I didn't like the idea, but it was undeniably there.

According to Jung, it is the opposition that creates the power (or **libido**) of the psyche. It is like the two poles of a battery, or the splitting of an atom. It is the contrast that gives energy, so that a strong contrast gives strong energy, and a weak contrast gives weak energy.

The second principle is the **principle of equivalence**. The energy created from the opposition is "given" to both sides equally. So, when I held that baby bird in my hand, there was energy to go ahead and try to help it. But there is an equal amount of energy to go ahead and crush it. I tried to help the bird, so that energy went into the various behaviors involved in helping it. But what happens to the other energy?

Well, that depends on your attitude towards the wish that you didn't fulfill. If you acknowledge it, face it, keep it available to the conscious mind, then the energy goes towards a general improvement of your psyche. You grow, in other words.

But if you pretend that you never had that evil wish, if you deny and suppress it, the energy will go towards the development of a **complex**. A complex is a pattern of
suppressed thoughts and feelings that cluster -- constellate -- around a theme provided by some archetype. If you deny ever having thought about crushing the little bird, you might put that idea into the form offered by the shadow (your "dark side"). Or if a man denies his emotional side, his emotionality might find its way into the anima archetype. And so on.

Here's where the problem comes: If you pretend all your life that you are only good, that you don't even have the capacity to lie and cheat and steal and kill, then all the times when you do good, that other side of you goes into a complex around the shadow. That complex will begin to develop a life of its own, and it will haunt you. You might find yourself having nightmares in which you go around stomping on little baby birds!

If it goes on long enough, the complex may take over, may "possess" you, and you might wind up with a multiple personality. In the movie The Three Faces of Eve, Joanne Woodward portrayed a meek, mild woman who eventually discovered that she went out and partied like crazy on Saturday nights. She didn't smoke, but found cigarettes in her purse, didn't drink, but woke up with hangovers, didn't fool around, but found herself in sexy outfits. Although multiple personality is rare, it does tend to involve these kinds of black-and-white extremes.

The final principle is the principle of entropy. This is the tendency for oppositions to come together, and so for energy to decrease, over a person's lifetime. Jung borrowed the idea from physics, where entropy refers to the tendency of all physical systems to "run down," that is, for all energy to become evenly distributed. If you have, for example, a heat source in one corner of the room, the whole room will eventually be heated.

When we are young, the opposites will tend to be extreme, and so we tend to have lots of energy. For example, adolescents tend to exaggerate male-female differences, with boys trying hard to be macho and girls trying equally hard to be feminine. And so their sexual activity is invested with great amounts of energy! Plus, adolescents often swing from one extreme to another, being wild and crazy one minute and finding religion the next.
As we get older, most of us come to be more comfortable with our different facets. We are a bit less naively idealistic and recognize that we are all mixtures of good and bad. We are less threatened by the opposite sex within us and become more androgynous. Even physically, in old age, men and women become more alike. This process of rising above our opposites, of seeing both sides of who we are, is called **transcendence**.

**The self**

The goal of life is to realize the **self**. The self is an archetype that represents the transcendence of all opposites, so that every aspect of your personality is expressed equally. You are then neither and both male and female, neither and both ego and shadow, neither and both good and bad, neither and both conscious and unconscious, neither and both an individual and the whole of creation. And yet, with no oppositions, there is no energy, and you cease to act. Of course, you no longer need to act.

To keep it from getting too mystical, think of it as a new center, a more balanced position, for your psyche. When you are young, you focus on the ego and worry about the trivialities of the persona. When you are older (assuming you have been developing as you should), you focus a little deeper, on the self, and become closer to all people, all life, even the universe itself. The self-realized person is actually less selfish.

**Synchronicity**

Personality theorists have argued for many years about whether psychological processes function in terms of **mechanism** or **teleology**. Mechanism is the idea that things work in through cause and effect: One thing leads to another which leads to another, and so on, so that the past determines the present. Teleology is the idea that we are lead on by our ideas about a future state, by things like purposes, meanings, values, and so on. Mechanism is linked with determinism and with the natural sciences. Teleology is linked with free will and has become rather rare. It is still common among moral, legal, and religious philosophers, and, of course, among personality theorists.
Among the people discussed in this book, Freudians and behaviorists tend to be mechanists, while the neo-Freudians, humanists, and existentialists tend to be teleologists. Jung believes that both play a part. But he adds a third alternative called **synchronicity**.

Synchronicity is the occurrence of two events that are not linked causally, nor linked teleologically, yet are meaningfully related. Once, a client was describing a dream involving a scarab beetle when, at that very instant, a very similar beetle flew into the window. Often, people dream about something, like the death of a loved one, and find the next morning that their loved one did, in fact, die at about that time. Sometimes people pick up the phone to call a friend, only to find that their friend is already on the line. Most psychologists would call these things coincidences, or try to show how they are more likely to occur than we think. Jung believed they were indications of how we are connected, with our fellow humans and with nature in general, through the collective unconscious.

Jung was never clear about his own religious beliefs. But this unusual idea of synchronicity is easily explained by the Hindu view of reality. In the Hindu view, our individual egos are like islands in a sea: We look out at the world and each other and think we are separate entities. What we don't see is that we are connected to each other by means of the ocean floor beneath the waters.

The outer world is called **maya**, meaning illusion, and is thought of as God's dream or God's dance. That is, God creates it, but it has no reality of its own. Our individual egos they call **jivatman**, which means individual souls. But they, too, are something of an illusion. We are all actually extensions of the one and only **Atman**, or God, who
allows bits of himself to forget his identity, to become apparently separate and independent, to become us. But we never truly are separate. When we die, we wake up and realize who we were from the beginning: God.

When we dream or meditate, we sink into our personal unconscious, coming closer and closer to our true selves, the collective unconscious. It is in states like this that we are especially open to "communications" from other egos. Synchronicity makes Jung's theory one of the rare ones that is not only compatible with parapsychological phenomena, but actually tries to explain them!

**Introversion and extroversion**

Jung developed a personality typology that has become so popular that some people don't realize he did anything else! It begins with the distinction between **introversion** and **extroversion**. Introverts are people who prefer their internal world of thoughts, feelings, fantasies, dreams, and so on, while extroverts prefer the external world of things and people and activities.

The words have become confused with ideas like shyness and sociability, partially because introverts tend to be shy and extroverts tend to be sociable. But Jung intended for them to refer more to whether you ("ego") more often faced toward the persona and outer reality, or toward the collective unconscious and its archetypes. In that sense, the introvert is somewhat more mature than the extrovert. Our culture, of course, values the extrovert much more. And Jung warned that we all tend to value our own type most!

We now find the introvert-extravert dimension in several theories, notably Hans Eysenck's, although often hidden under alternative names such as "sociability" and "surgency."

**The functions**

Whether we are introverts or extroverts, we need to deal with the world, inner and outer. And each of us has our preferred ways of dealing with it, ways we are comfortable with and good at. Jung suggests there are four basic ways, or **functions**: 
The first is **sensing**. Sensing means what it says: getting information by means of the senses. A sensing person is good at looking and listening and generally getting to know the world. Jung called this one of the **irrational** functions, meaning that it involved perception rather than judging of information.

The second is **thinking**. Thinking means evaluating information or ideas rationally, logically. Jung called this a **rational** function, meaning that it involves decision making or judging, rather than simple intake of information.

The third is **intuiting**. Intuiting is a kind of perception that works outside of the usual conscious processes. It is irrational or perceptual, like sensing, but comes from the complex integration of large amounts of information, rather than simple seeing or hearing. Jung said it was like seeing around corners.

The fourth is **feeling**. Feeling, like thinking, is a matter of evaluating information, this time by weighing one's overall, emotional response. Jung calls it rational, obviously not in the usual sense of the word.

![Diagram of psychological functions](image)

We all have these functions. We just have them in different proportions, you might say. Each of us has a **superior** function, which we prefer and which is best developed in us, a **secondary** function, which we are aware of and use in support of our superior function, a **tertiary** function, which is only slightly less developed but not terribly conscious, and an **inferior** function, which is poorly developed and so unconscious that we might deny its existence in ourselves.
Most of us develop only one or two of the functions, but our goal should be to develop all four. Once again, Jung sees the transcendence of opposites as the ideal.

Assessment

Katharine Briggs and her daughter Isabel Briggs Myers found Jung's types and functions so revealing of people's personalities that they decided to develop a paper-and-pencil test. It came to be called the **Myers-Briggs Type Indicator**, and is one of the most popular, and most studied, tests around.

On the basis of your answers on about 125 questions, you are placed in one of sixteen types, with the understanding that some people might find themselves somewhere between two or three types. What type you are says quite a bit about you -- your likes and dislikes, your likely career choices, your compatibility with others, and so on. People tend to like it quite a bit. It has the unusual quality among personality tests of not being too judgmental: None of the types is terribly negative, nor are any overly positive. Rather than assessing how "crazy" you are, the "Myers-Briggs" simply opens up your personality for exploration.

The test has four scales. **Extroversion - Introversion** (E-I) is the most important. Test researchers have found that about 75% of the population is extroverted.

The next one is **Sensing - Intuiting** (S-N), with about 75% of the population sensing.

The next is **Thinking - Feeling** (T-F). Although these are distributed evenly through the population, researchers have found that two-thirds of men are thinkers, while two-thirds of women are feelers. This might seem like stereotyping, but keep in mind that feeling and thinking are both valued equally by Jungians, and that one-third of men are feelers and one-third of women are thinkers. Note, though, that society does value thinking and feeling differently, and that feeling men and thinking women often have difficulties dealing with people's stereotyped expectations.

The last is **Judging - Perceiving** (J-P), not one of Jung's original dimensions. Myers and Briggs included this one in order to help determine which of a person's functions is superior. Generally, judging people are more careful, perhaps inhibited, in their lives. Perceiving people tend to be more spontaneous, sometimes careless. If you are
an extrovert and a "J," you are a thinker or feeler, whichever is stronger. Extroverted and "P" means you are a senser or intuiter. On the other hand, an introvert with a high "J" score will be a senser or intuiter, while an introvert with a high "P" score will be a thinker or feeler. J and P are equally distributed in the population.

Each type is identified by four letters, such as ENFJ. These have proven so popular, you can even find them on people's license plates!

**ENFJ** (Extroverted feeling with intuiting): These people are easy speakers. They tend to idealize their friends. They make good parents, but have a tendency to allow themselves to be used. They make good therapists, teachers, executives, and salespeople.

**ENFP** (Extroverted intuiting with feeling): These people love novelty and surprises. They are big on emotions and expression. They are susceptible to muscle tension and tend to be hyperalert. They tend to feel self-conscious. They are good at sales, advertising, politics, and acting.

**ENTJ** (Extroverted thinking with intuiting): In charge at home, they expect a lot from spouses and kids. They like organization and structure and tend to make good executives and administrators.

**ENTP** (Extroverted intuiting with thinking): These are lively people, not humdrum or orderly. As mates, they are a little dangerous, especially economically. They are good at analysis and make good entrepreneurs. They do tend to play at one-upmanship.

**ESFJ** (Extroverted feeling with sensing): These people like harmony. They tend to have strong shoulds and should-nots. They may be dependent, first on parents and later on spouses. They wear their hearts on their sleeves and excel in service occupations involving personal contact.

**ESFP** (Extroverted sensing with feeling): Very generous and impulsive, they have a low tolerance for anxiety. They make good performers, they like public relations, and they love the phone. They should avoid scholarly pursuits, especially science.
**ESTJ** (Extroverted thinking with sensing): These are responsible mates and parents and are loyal to the workplace. They are realistic, down-to-earth, orderly, and love tradition. They often find themselves joining civic clubs!

**ESTP** (Extroverted sensing with thinking): These are action-oriented people, often sophisticated, sometimes ruthless -- our "James Bonds." As mates, they are exciting and charming, but they have trouble with commitment. They make good promoters, entrepreneurs, and con artists.

**INFJ** (Introverted intuiting with feeling): These are serious students and workers who really want to contribute. They are private and easily hurt. They make good spouses, but tend to be physically reserved. People often think they are psychic. They make good therapists, general practitioners, ministers, and so on.

**INFP** (Introverted feeling with intuiting): These people are idealistic, self-sacrificing, and somewhat cool or reserved. They are very family and home oriented, but don't relax well. You find them in psychology, architecture, and religion, but never in business.

**INTJ** (Introverted intuiting with thinking): These are the most independent of all types. They love logic and ideas and are drawn to scientific research. They can be rather single-minded, though.

**INTP** (Introverted thinking with intuiting): Faithful, preoccupied, and forgetful, these are the bookworms. They tend to be very precise in their use of language. They are good at logic and math and make good philosophers and theoretical scientists, but not writers or salespeople.

**ISFJ** (Introverted sensing with feeling): These people are service and work oriented. They may suffer from fatigue and tend to be attracted to troublemakers. They are good nurses, teachers, secretaries, general practitioners, librarians, middle managers, and housekeepers.

**ISFP** (Introverted feeling with sensing): They are shy and retiring, are not talkative, but like sensuous action. They like painting, drawing, sculpting, composing, dancing -- the arts generally -- and they like nature. They are not big on commitment.
ISTJ (Introverted sensing with thinking): These are dependable pillars of strength. They often try to reform their mates and other people. They make good bank examiners, auditors, accountants, tax examiners, supervisors in libraries and hospitals, business, home ec., and phys. ed. teachers, and boy or girl scouts!

ISTP (Introverted thinking with sensing): These people are action-oriented and fearless, and crave excitement. They are impulsive and dangerous to stop. They often like tools, instruments, and weapons, and often become technical experts. They are not interested in communications and are often incorrectly diagnosed as dyslexic or hyperactive. They tend to do badly in school.

JEAN PIAGET 1896 - 1980

Theory

Jean Piaget began his career as a biologist -- specifically, a malacologist! But his interest in science and the history of science soon overtook his interest in snails and clams. As he delved deeper into the thought-processes of doing science, he became interested in the nature of thought itself, especially in the development of thinking. Finding relatively little work done in the area, he had the opportunity to give it a label. He called it genetic epistemology, meaning the study of the development of knowledge.

He noticed, for example, that even infants have certain skills in regard to objects in their environment. These skills were certainly simple ones, sensori-motor skills, but they directed the way in which the infant explored his or her environment and so how they gained more knowledge of the world and more sophisticated exploratory skills. These skills he called schemas.

For example, an infant knows how to grab his favorite rattle and thrust it into his mouth. He’s got that schema down pat. When he comes across some other object -- say daddy’s expensive watch, he easily learns to transfer his “grab and thrust” schema to the new object. This Piaget called assimilation, specifically assimilating a new object into an old schema.
When our infant comes across another object again -- say a beach ball -- he will try his old schema of grab and thrust. This of course works poorly with the new object. So the schema will adapt to the new object: Perhaps, in this example, “squeeze and drool” would be an appropriate title for the new schema. This is called accommodation, specifically accommodating an old schema to a new object.

Assimilation and accommodation are the two sides of adaptation, Piaget’s term for what most of us would call learning. Piaget saw adaptation, however, as a good deal broader than the kind of learning that Behaviorists in the US were talking about. He saw it as a fundamentally biological process. Even one’s grip has to accommodate to a stone, while clay is assimilated into our grip. All living things adapt, even without a nervous system or brain.

Assimilation and accommodation work like pendulum swings at advancing our understanding of the world and our competency in it. According to Piaget, they are directed at a balance between the structure of the mind and the environment, at a certain congruency between the two, that would indicate that you have a good (or at least good-enough) model of the universe. This ideal state he calls equilibrium.

As he continued his investigation of children, he noted that there were periods where assimilation dominated, periods where accommodation dominated, and periods of relative equilibrium, and that these periods were similar among all the children he looked at in their nature and their timing. And so he developed the idea of stages of cognitive development. These constitute a lasting contribution to psychology.

**The sensorimotor stage**

The first stage, to which we have already referred, is the sensorimotor stage. It lasts from birth to about two years old. As the name implies, the infant uses senses and motor abilities to understand the world, beginning with reflexes and ending with complex combinations of sensorimotor skills.

Between one and four months, the child works on primary circular reactions -- just an action of his own which serves as a stimulus to which it responds with the same action, and around and around we go. For example, the baby may suck her thumb.
That feels good, so she sucks some more... Or she may blow a bubble. That’s interesting so I’ll do it again....

Between four and 12 months, the infant turns to **secondary circular reactions**, which involve an act that extends out to the environment: She may squeeze a rubber duckie. It goes “quack.” That’s great, so do it again, and again, and again. She is learning “procedures that make interesting things last.”

At this point, other things begin to show up as well. For example, babies become ticklish, although they must be aware that someone else is tickling them or it won’t work. And they begin to develop object permanence. This is the ability to recognize that, just because you can’t see something doesn’t mean it’s gone! Younger infants seem to function by an “out of sight, out of mind” schema. Older infants remember, and may even try to find things they can no longer see.

Between 12 months and 24 months, the child works on **tertiary circular reactions**. They consist of the same “making interesting things last” cycle, except with constant variation. I hit the drum with the stick -- rat-tat-tat-tat. I hit the block with the stick -- thump-thump. I hit the table with the stick -- clunk-clunk. I hit daddy with the stick -- ouch-ouch. This kind of active experimentation is best seen during feeding time, when discovering new and interesting ways of throwing your spoon, dish, and food.

Around one and a half, the child is clearly developing **mental representation**, that is, the ability to hold an image in their mind for a period beyond the immediate experience. For example, they can engage in **deferred imitation**, such as throwing a tantrum after seeing one an hour ago. They can use **mental combinations** to solve simple problems, such as putting down a toy in order to open a door. And they get good at pretending. Instead of using dollies essentially as something to sit at, suck on, or throw, now the child will sing to it, tuck it into bed, and so on.

**Preoperational stage**

The preoperational stage lasts from about two to about seven years old. Now that the child has mental representations and is able to pretend, it is a short step to the use of **symbols**.
A symbol is a thing that represents something else. A drawing, a written word, or a spoken word comes to be understood as representing a real dog. The use of language is, of course, the prime example, but another good example of symbol use is **creative play**, wherein checkers are cookies, papers are dishes, a box is the table, and so on. By manipulating symbols, we are essentially thinking, in a way the infant could not: in the absence of the actual objects involved!

Along with symbolization, there is a clear understanding of past and future. For example, if a child is crying for its mother, and you say “Mommy will be home soon,” it will now tend to stop crying. Or if you ask him, “Remember when you fell down?” he will respond by making a sad face.

On the other hand, the child is quite **egocentric** during this stage, that is, he sees things pretty much from one point of view: his own! She may hold up a picture so only she can see it and expect you to see it too. Or she may explain that grass grows so she won’t get hurt when she falls.

Piaget did a study to investigate this phenomenon called the mountains study. He would put children in front of a simple plaster mountain range and seat himself to the side, then ask them to pick from four pictures the view that he, Piaget, would see. Younger children would pick the picture of the view they themselves saw; older kids picked correctly.
Similarly, younger children center on one aspect of any problem or communication at a time. For example, they may not understand you when you tell them “Your father is my husband.” Or they may say things like “I don’t live in the USA; I live in Pennsylvania!” Or, if you show them five black and three white marbles and ask them “Are there more marbles or more black marbles?” they will respond “More black ones!”

Perhaps the most famous example of the preoperational child’s centrism is what Piaget refers to as their inability to conserve liquid volume. If I give a three year old some chocolate milk in a tall skinny glass, and I give myself a whole lot more in a short fat glass, she will tend to focus on only one of the dimensions of the glass. Since the milk in the tall skinny glass goes up much higher, she is likely to assume that there is more milk in that one than in the short fat glass, even though there is far more in the latter. It is the development of the child’s ability to decenter that marks him as having moved to the next stage.

**Concrete operations stage**

The concrete operations stage lasts from about seven to about 11. The word operations refers to logical operations or principles we use when solving problems.
In this stage, the child not only uses symbols representationally, but can manipulate those symbols logically. Quite an accomplishment! But, at this point, they must still perform these operations within the context of concrete situations.

The stage begins with progressive decentering. By six or seven, most children develop the ability to **conserve** number, length, and liquid volume. **Conservation** refers to the idea that a quantity remains the same despite changes in appearance. If you show a child four marbles in a row, then spread them out, the preoperational child will focus on the spread, and tend to believe that there are now more marbles than before.

![Marbles](image1)

Or if you have two five inch sticks laid parallel to each other, then move one of them a little, she may believe that the moved stick is now longer than the other.

![Sticks](image2)

The concrete operations child, on the other hand, will know that there are still four marbles, and that the stick doesn’t change length even though it now extends beyond the other. And he will know that you have to look at more than just the height of the milk in the glass: If you pour the milk from the short, fat glass into the tall, skinny glass, he will tell you that there is the same amount of milk as before, despite the dramatic increase in milk-level!

![Milk](image3)
By seven or eight years old, children develop conservation of substance: If I take a ball of clay and roll it into a long thin rod, or even split it into ten little pieces, the child knows that there is still the same amount of clay. And he will know that, if you rolled it all back into a single ball, it would look quite the same as it did -- a feature known as **reversibility**.

By nine or ten, the last of the conservation tests is mastered: conservation of area. If you take four one-inch square pieces of felt, and lay them on a six-by-six cloth together in the center, the child who conserves will know that they take up just as much room as the same squares spread out in the corners, or, for that matter, anywhere at all.

If all this sounds too easy to be such a big deal, test your friends on conservation of mass: Which is heavier: a million tons of lead, or a million tons of feathers?

In addition, a child learns **classification** and **seriation** during this stage. Classification refers back to the question of whether there are more marbles or more black marbles? Now the child begins to get the idea that one set can include another. Seriation is putting things in order. The younger child may start putting things in order by, say size, but will quickly lose track. Now the child has no problem with such a task. Since arithmetic is essentially nothing more than classification and seriation, the child is now ready for some formal education!

**Formal operations stage**

But the concrete operations child has a hard time applying his new-found logical abilities to non-concrete -- i.e. abstract -- events. If mom says to junior “You
shouldn’t make fun of that boy’s nose. How would you feel if someone did that to you?” he is likely to respond “I don’t have a big nose!” Even this simple lesson may well be too abstract, too hypothetical, for his kind of thinking.

Don’t judge the concrete operations child too harshly, though. Even adults are often taken-aback when we present them with something hypothetical: “If Edith has a lighter complexion than Susan, and Edith is darker than Lily, who is the darkest?” Most people need a moment or two.

From around 12 on, we enter the formal operations stage. Here we become increasingly competent at adult-style thinking. This involves using logical operations, and using them in the abstract, rather than the concrete. We often call this **hypothetical thinking**.

Here’s a simple example of a task that a concrete operations child couldn’t do, but which a formal operations teenager or adult could -- with a little time and effort. Consider this rule about a set of cards that have letters on one side and numbers on the other: “If a card has a vowel on one side, then it has an even number on the other side.” Take a look at the cards below and tell me, which cards do I need to turn over to tell if this rule is actually true? You’ll find the answer at the end of this chapter.

It is the formal operations stage that allows one to investigate a problem in a careful and systematic fashion. Ask a 16 year old to tell you the rules for making pendulums swing quickly or slowly, and he may proceed like this:

A long string with a light weight -- let’s see how fast that swings.
A long string with a heavy weight -- let’s try that.
Now, a short string with a light weight.
And finally, a short string with a heavy weight.
His experiment -- and it is an experiment -- would tell him that a short string leads to a fast swing, and a long string to a slow swing, and that the weight of the pendulum means nothing at all!

The teenager has learned to group possibilities in four different ways:

By **conjunction**: “Both A and B make a difference” (e.g. both the string’s length and the pendulum’s weight).

By **disjunction**: “It’s either this or that” (e.g. it’s either the length or the weight).

By **implication**: “If it’s this, then that will happen” (the formation of a hypothesis).

By **incompatibility**: “When this happens, that doesn’t” (the elimination of a hypothesis).

On top of that, he can operate on the operations -- a higher level of grouping. If you have a proposition, such as “it could be the string or the weight,” you can do four things with it:

**Identity**: Leave it alone. “It could be the string or the weight.”

**Negation**: Negate the components and replace or’s with and’s (and vice versa). “It might not be the string and not the weight, either.”

**Reciprocity**: Negate the components but keep the and’s and or’s as they are. “Either it is not the weight or it is not the string.”

**Correlativity**: Keep the components as they are, but replace or’s with and’s, etc. “It’s the weight and the string.”

Someone who has developed his or her formal operations will understand that the correlate of a reciprocal is a negation, that a reciprocal of a negation is a correlate, that the negation of a correlate is a reciprocal, and that the negation of a reciprocal of a correlate is an identity (phew!!!).

Maybe it has already occurred to you: It doesn’t seem that the formal operations stage is something everyone actually gets to. Even those of us who do don’t operate in it at
Abstract reasoning is simply not universal.

[Answer to the card question: The E and the 7. The E must have an even number on the back -- that much is obvious. the 7 is odd, so it cannot have a vowel on the other side -- that would be against the rule! But the rule says nothing about what has to be on the back of a consonant such as the K, nor does it say that the 4 must have a vowel on the other side!]

The Ultimate Theory of Personality

After a semester of Personality theories -- Freud and Jung and Rogers and Frankl and Bandura and Eysenck, etc., etc., etc. -- students often ask, once again, isn’t there one theory we can trust and use with confidence? Can’t we narrow it down a bit? Tell us, what is right and what is not!

Well, unfortunately, Personality is not yet a science, at least not in the sense that Biology or Chemistry are sciences. In those fields, although there is disagreement about details and the latest findings, there is a common body of knowledge that few people in the field argue about. Not so, obviously, in Personality.

However, there are slowly emerging ideas that seem to pop up again and again in different theories, often with different names, but there none-the-less. Sometimes they occur in theories that are otherwise quite different, or that come from a different perspective, such as clinical versus experimental versus factor analysis versus phenomenological. Perhaps the field will indeed become a science, perhaps not too far in the future!

I know I’m excited!

So, I have taken the bull by the cojones, so to speak, and have compiled this little list of things I see as being, if not universal, at least more likely features of the future ultimate theory of personality. Here goes...

Consciousness and the unconscious
This, of course, is one of Freud’s greatest contributions. Even if he didn’t invent the terms, he certainly was responsible for popularizing them! Many theories postulate some sort of unconscious, not necessarily as a place where our worst fears bubble and boil, but as a way of accounting for the many things that influence us without our full awareness.

We can pick out three aspects of the unconscious.

The first is **biological**. We come into this life with something like Freud’s id or Jung’s collective unconscious in place. It is likely composed of whatever instincts remain a part of our human nature, plus our temperament or inborn personality, and perhaps the preprogramming for stages of life. This biological unconscious overlaps in part with the existentialist concept of thrownness.

As for possible instincts, I would nominate three “complexes” of them: A mating complex, an assertive complex, and a nurturant (or social) complex.

Second, there is the social unconscious (as Fromm calls it), which actually resembles Freud’s superego more than Freud's id. It might include our language, social taboos, cultural habits, and so on. It includes all the cultural things we were surrounded with in our childhood and have learned so well that they have become “second nature” to us! The negative aspects of the social unconscious overlaps with the existential idea of fallenness and with Rogers’ idea of conditions of worth.

And third, there is the personal unconscious (to borrow Jung’s term), perhaps understood as the unconscious aspect of the ego. It is composed of our idiosyncratic habits, the more personal things we have learned so well we no longer need to be conscious of them in order to enact them -- like knowing how to drive so well that we can comb our hair, talk on a cell phone, light a cigarette, and notice the attractive person in the rear view mirror all at the same time (at least until you run off the road into a tree).

Included among those well-learned things might be the defense mechanisms. With these we ignore, with habitual efficiency, uncomfortable realities in order to save our sense of self-worth. More a little later....
But let's not get overly enthusiastic about the unconscious! Few psychologists today view it as the location of our true selves, the answer to all our problems, or some deep psychic well that connects us with the universe or God! It is where the more-or-less automatic processes of instinct and the well-learned do their thing.

All this is in contrast to (in fact defined in contrast to) consciousness or awareness. Other than instincts and perhaps a few associations learned by classical conditioning, it seems that all things going into or out of our psyches pass through awareness.

What consciousness is will be a question for a good while longer. It’s not terribly available to traditional research methods! But for now, we can see it as the ability to experience reality (outer and inner) together with its meaning or relevance to ourselves (as biological, social, and even individual organisms). Or the ability to be open to the world while maintaining a degree of separation in the form of an integrated self. I would add that it may be consciousness that also provides us with the freedom to choose among the choices available to us -- i.e. self-determination (if not full-blown free will).

Perhaps the most important thing to keep in mind about consciousness is that it is personal. It is yours and yours alone. And it is within this personal consciousness that all of your "psychology" takes place. Everything you feel, perceive, think, and do is phenomenological, i.e. experience that is not just based on a reality that stands
outside of you, but on your **subjective** view of reality as well, a view which may be significantly different from mine! Therefore, in order to understand people, we need to understand them from the inside. This little fact is what makes psychology so much more difficult than the physical sciences!

**Self-determination**

Free will doesn't fit very well with science. It seems to require "supernatural" involvement in the natural world. But we really don't have to be "above" the natural world in order to have a degree of freedom within that world.

The baby begins life nearly as intimately connected with his or her world as in the womb. As we develop from babies into adults, we gradually separate ourselves from the world. Our interior causal processes - especially mental processes - become increasingly independent of the causal processes outside of us. A gap develops that allows us to be influenced by outside situations, but not necessarily determined by them.

This gap is like a large river: The man on the opposite bank can wave and jump and yell all he wants -- he cannot directly affect us. But we can listen to him or interpret his semaphore signals. We can treat his antics as information to add to all the
information we have gathered over our lives, and use that information to influence our decisions -- influence, but not cause.

By the end of life, some of us are nearly impervious to what others think about us, can rise above nearly any threat or seductive promise, can ignore nearly any kind of urge or pain. We are still determined - but little in our immediate situation is more than information we utilize in making our decisions. This may not be free will in the absolute sense, but it is certainly self-determination.

As a middle-aged man, I have dozens of years of experiences -- my childhood, my cultural inheritance, the books I've read, conversations with friends, my own thoughts -- that have made me who I am today. All this is on top of my unique genetics and other physical realities of who I am. The things that happen to me now are experienced through this mass of uniqueness, and my responses depend, not only on my present situation, but on all that I am.

**Stages**

Stages are something most personality theorists shy away from. Freud and Erikson are the obvious exceptions, as is the developmentalist Piaget. And yet there is a very biological basis for the idea. We can, on pure biology, separate out at least three stages: the *fetus*, the *child*, and the *adult*. This is, in fact, completely parallel to the egg, caterpillar, butterfly example we learned in high school biology!

In addition, we can see three transitional stages: *infancy, adolescence, and senescence*.

*Infancy* is not, actually, found in more primitive animals, and is greatly exaggerated in humans. We are, in a sense, all born prematurely. Perhaps this was the result of an evolutionary dilemma: How can an upright creature give birth to a baby with a large head without killing the mom? That’s right: Give birth before it gets too big!
What that does for us is more than just let us live long enough to give birth again. It lets the infant soak up information much earlier, and in a different way. It would seem that for the first 6 to 12 months, our neural development is as yet incomplete. As we learn, we actually create certain neural paths, rather than just tightening synapses as we do later in life. It’s as if we were actually learning instincts!

**Adolescence** also qualifies, I believe, as a stage. The transition from child to adult involves rather massive hormonal changes accompanied by a growth spurt like you hadn’t seen since you were two! It is hard for me to conceive of these changes not having some effect on us psychologically.

**Senescence** is, strictly speaking, the last year or so of a full life, during which time the organs begin to deteriorate and shut down. We don’t usually see this as a stage, and in fact most people never reach it (accidents and diseases usually beat senescence to the punch). But socially speaking, in our culture we certainly prepare ourselves for this inevitability, and that might constitute a social stage, if not a biological one.

As this last point suggests, there are certainly cultural additions we can make. In *our* culture, there is a sharp transition from preschool child to school child, and another sharp transition from single adult to married adult. For all the power of biology, these social stages can be every bit as powerful.
To venture a guess as to the psychological side of these biological stages: The fetus focuses on biological development, which is transformed by the presence of others in the infant into ego development in the child. In turn, the ego development of the child is transformed by the advent of sexuality in adolescence into the “trans-ego” or social development of the adult.

Another way to look at it goes like this: In the fetal and infancy stages, we lay the groundwork and develop our temperaments (founded in hormones and neurotransmitters). In the child stage, we develop a personality (founded in habits). In adolescence, continuing into adulthood, we develop character (based on conscious decision-making).

**Temperament**

Temperament is what we call that part of our personalities or characters that is built-in to us genetically. Consequentially, although there is always a degree of flexibility allowed, to a large extent we "are" our temperaments for our whole lives.
Temperament is very in right now, and justifiably so. Jung led the way, Eysenck made it more scientifically acceptable, and the Big Five made it official.

Nearly everyone I know of accepts two dimensions of personality as established before birth, probably genetically:

- **emotional stability** (AKA neuroticism...) and
- **extraversion-introversion** (AKA sociability, surgency...).

Three more seem to have popular approval:

- **conscientiousness** (AKA anality, judging-perceiving...)
- **agreeableness** (AKA warmth, feeling-thinking...)
- **openness** (AKA culture, intellect, intuiting-sensing...) - possibly an aspect of intelligence

And there are three other contenders that are a little harder to place:

- **psychoticism** (Eysenck) - perhaps a combination of dis-agreeableness and non-conscientiousness
- **impulsivity** (Buss and Plomin) - perhaps an aspect of non-conscientiousness
- **activity** (Buss and Plomin) - perhaps an aspect of extraversion

But we need to beware: These results of factor analysis may be as much a reflection of language as of true genetic foundations of personality. As we continue to develop our understanding of genetics and the precise relationships of protein synthesis to
brain function, we may find that there are hundreds of "temperaments," or find instead that the concept doesn't hold up at all.

**Learning**

With the exception of Skinner, Bandura, Kelly, and a few others, learning is rather taken for granted by most personality theorists. But I suspect it shouldn’t be. We can postulate at least three kinds of learning: **basic**, **social**, and **verbal**.

**Basic learning** includes the behaviorist Pavlovian and Skinnerian **conditioning**, of course -- getting feedback from your environment. It also includes the **latent learning** that E. C. Tolman talked about: We learn about our environment just by being in it! George Kelly’s way of looking at basic learning derives from the work of Snygg and Combs, which in turn derives from the Gestalt psychologists: We learn to **differentiate** one thing from another on the basis of the consequences. Either way, behaviorist or gestalt, this kind of learning requires little in the way of consciousness. There is also environmental learning that involves other people. When junior does something that mom or dad does not approve of -- he may be **punished** in some fashion. Likewise, he may be **rewarded** when he does something right for a change. This is also usually called conditioning, but the fact that it involves others means it is also social learning, and so fraught with extra difficulties.

For example, if every time your run into a tree your head hurts, you will stop running into the tree. On the other hand, if every time you say "shit!" your dad hits you upside the head, you may stop... or you may avoid dad, say shit under your breath, begin to hate your father and authority in general, start beating up little kids after school, and so on, until prison effectively stops the behavior. These kind of things seldom happen with trees.

**Social learning** includes **vicarious learning** (noticing and recalling the kinds of environmental feedback and social conditioning other people get) and **imitation** (Bandura’s **modeling**). This kind of learning is probably the most significant for the development of personality. It can be either conscious, as when we are watching an artist to learn their technique, or unconscious, as when we grow up to be disconcertingly like our parents.
And there’s verbal learning -- learning not from the environment or the behavior of others, but from words. Culturally, this is, of course, a highly significant form of learning. Most of the learning we do in our many years of schooling is verbal. And yet we don’t know that much about it at all!

One thing is certain: The old models of the rat with his conditioned and shaped behavior, and of the computer with its programming, are not very good ones. If you really need a simple metaphor for human learning, you are better off thinking of people - especially children - as sponges!

Emotions

Emotions or feelings have always been a key point of interest in personality theories. At the lowest level, we have pain and pleasure, which are really more like sensations than feelings. There is also psychological pain and pleasure -- call them distress and delight -- which may be the root of all other emotions. Distress is what we feel when the events of the world are more than we can handle. Delight is what we feel when we discover that we can handle them after all!

Anxiety is a favorite topic in personality theories. Although many definitions have been proposed for anxiety, they tend to revolve around unnecessary or inappropriate fear. Kelly notes that it is actually the anticipation of a fearful situation, accurately or not. Fear, in turn, is usually understood as involving the perception of imminent harm, physical or psychological. These definitions serve well for most circumstances.

Guilt is another key emotion. Related to shame, it is usually understood as the feelings aroused when one contravenes internalized social rules. Kelly provides a useful elaboration: He defines it as the feeling we get when we contravene our own self-definition (which may or may not involve those standard social rules!). Existentialists add another detail by suggesting that guilt is closely related to the sense of regret about opportunities not taken.

Sadness is the experience of the world not being as it should be, with the added notion that we have no power to alter the situation. Instead, there is a need to alter ourselves -- something we are innately reluctant to do! Grief would be the obvious
extreme example, and depression could be defined as unrealistic sadness that continues long after the original situation.

**Anger** is similar to sadness: The world is not as it should be. But now, there's the added notion that we must energize ourselves to change the situation. When we act on our anger, it becomes **aggression**. Anger and aggression are not necessarily bad: It is our anger at social injustices, for example, and aggressive action to correct them, that makes for positive social change! Unrealistic anger, the kind we hang on to despite the suffering it causes us and the people around us, could be labelled **hostility**.

There are, of course, many other emotions and emotional shadings we could try to define, but that's for another time and place. Just one more thing should be noted: It appears that, where there is consciousness, there is emotion -- at very least an emotional tone or mood. As the existentialists point out, we just cannot **not** care.

**Motivation**

Now here’s a more difficult one: Motivation is central to most theories of personality, and the variety seems unending! But perhaps a little organization will help.

First, there are the **biological motivations**, mostly instinctual (although addictions are acquired). There is our need for air, water, food. There is the need for pain-avoidance. There is the need for pleasure: pleasant touch, comforting, sex. We may
want to add the **instinct** complexes mentioned earlier: mating, assertiveness, nurturance. All theories accept the idea of biological motivation, although they differ wildly about their importance relative to each other as well as to other kinds of motivation.

Second, there are the **social motivations**. They may build on the biological motivations, especially the instinct complexes, but they vary enormously depending upon culture and even individual social situations and learning. Because they are learned so well and early, we could borrow Maslow’s term and call them **instinctoid**. Social motivation may include our need for acceptance, attention, and approval (Rogers’ **positive regard**), as well as those forms of self-esteem that are based on such approval. Shame and guilt are clearly factors in social motivation, as is pride.

Parallel to the idea of a personal unconscious, we might also postulate **personal motivations**. These would be learned from our unique and idiosyncratic experiences.

Last, but not least, there are **higher motivations**. These are conscious and we perceive them as providing our lives with **meaning**. There appear to be two broad kinds:

The first, **self-enhancement**. Here we find those motivations that lead us to extend ourselves beyond mere survival and comfort, that lead us to be "all that we can be." It includes such motives as desire to learn more than is needed, attain mastery beyond mere competence, and creativity. Adler might call it striving for superiority or perfection.

The second, **self-transcendence**, Most clearly defined by Viktor Frankl, it is an outgrowth of our natural tendencies to care about our children, families, friends, and lovers, and our innate capacity for empathy. It includes altruism, love, compassion, and Adler’s social concern. Perhaps it also includes other experiences that take us out of ourselves, such as music, art, literature, dance, and the beauty of nature.

Erikson in particular talks about these two motives, especially in the adult stages. Whether they are simply derivatives of the lower needs or are indeed something more, will remain a point of discussion for many years into the future!
It seems to me that all of the preceding, and probably a few I’ve missed, qualify as motivations. Disagreements as to which are most significant are perhaps misguided -- perhaps that differs from individual to individual! And the possibility that higher motivations derive from lower ones in no way diminishes their significance. Rollo May's idea of a large number of daimons, unique to each individual, may be the best approach.

**Balance**

Another common theme in personality theories is the idea of balance. Freud, for example, felt that all of life's "crises" were best resolved at some midpoint between two extremes -- Potty training was to be accomplished not too early, not too late, not too harshly, not too leniently. The result of a balanced upbringing would be a balanced personality -- not too retentive, not too expulsive, for example.

Even when talking about positive experiences, such as learning to act on our imaginations, we need to recognize that those positive experiences need to be tempered with at least a small amount of negative experiences. For example, without a little shame and self-doubt, Erikson tells us, acting on our imaginations becomes ruthless.

Carl Jung’s entire theory revolves around balance, especially between anima and animus and between the ego and the shadow. The former in particular has received a great deal of attention and empirical support: Androgenous people (those who combine qualities of both the "feminine" and the "masculine") appear to be mentally healthier. The latter also has support: People who are able to think in "shades of gray" are much more mature than those who see everything as black and white, good vs. evil, us vs. them. Ego vs shadow might also be understood as a need to balance rationality with emotion.
The balancing act that has gotten the most attention from personality psychologists is the balancing of our desires for **individuality** and **community**. This idea originated with Otto Rank’s contrast between a desire for both "life" (our drive towards individuality) and "death" (our drive towards union with others), as well as the corresponding fears (isolation vs. engulfment). Rollo May uses the words **will** and **love**, others use words such as **autonomy** and **homonymy**, **agency** and **communion**, **egoism** and **altruism**, and so on. Founded in our instincts for assertiveness and nurturance, in their highest forms they are self-enhancement and self-transcendence, respectively.

Whatever the words, the balance to be achieved is between the impulse to serve oneself (becoming all one can be as an individual) and the impulse to serve others (become one with the universe of others). But serve only yourself, and you end up alone; serve only others, and you lose your identity. Instead, one must serve oneself in order to serve others well, and serve others in order to best serve oneself. At some point the two aren’t so much balanced as working synergistically. Here’s a nice quote from good old Einstein that sums it up nicely:

*Man is, at one and the same time, a solitary being and a social being. As a solitary being, he attempts to protect his own existence and that of those who are closest to him, to satisfy his personal desires, and to develop his innate abilities. As a social being, he seeks to gain the recognition and affection of his fellow human beings, to share in their pleasures, to comfort them in their sorrows, and to improve their conditions of life. Only the existence of these varied, frequently conflicting strivings*
accounts for the special character of a man, and their specific combination determines the extent to which an individual can achieve an inner equilibrium and can contribute to the well-being of society. (Einstein, "Why Socialism?" in Monthly Review, NY, May 1949)

Neurosis

Life is filled with stress. Many people's difficulties begin with childhood experiences of abuse, neglect, poverty, sickness, parent's sicknesses or death, parental psychological problems, divorce, immigration, accidents, deformities, etc. Sometimes, we are strong enough, or have enough support, to weather these storms. More often, we find that these experiences leave us with an on-going apprehension about life. We end up suffering from anxiety, guilt, sadness, anger... not just as a direct result of the specific experience, but because we no longer trust life.

A child with loving parents and compassionate relations, peers, and teachers may well be able to cope with these problems. On the other hand, a lack of support, a lack of what Rogers calls positive regard, can leave even a child blessed with a comfortable environment troubled with self-doubt and insecurity.

Many of our theories were developed in order to help those who cannot cope, and looking at Adler, Horney, Rogers, Bandura, and others, we find a great deal of agreement as to the details. As I said a moment ago, in order to cope with life's difficulties, we need positive regard -- a little love, approval, respect, attention.... But others often make that love and approval conditional upon meeting certain standards, not all of which we can meet. Over time, we learn to judge ourselves by those standards. It is this incongruence (Rogers’ term) between what we need and what we allow ourselves that leaves us with low self-esteem, or what others call a poor self-concept or an inferiority complex.

There is a real advantage to the idea of inferiority over self-esteem: It is rare to have an overall sense of low self-esteem. Instead, most people have a sense of inferiority in some domains and not in others. Acknowledging the specificity of inferiority allows us to focus in on possible remedies, while just saying
someone suffers from low self-esteem leaves us with little sense of where to start!

Confronted with the difficulties of life, lacking in the support of others, and not even enjoying confidence in ourselves, we find we must defend ourselves however we can. We can list a large number of defense mechanisms, as Anna Freud did, or we might be able to simplify a little, like Carl Rogers: We defend our sensitive egos by denial and rationalization.

Denial (perhaps including repression) is the attempt to block the offending experiences directly, at the cost of emotional exhaustion.

Rationalization (including, perhaps, perceptual distortion) is a more sophisticated and less exhausting way of dealing with the offending information by working around it.

Either way, they are lies we tell ourselves and others in order to minimize the impact of that incongruence between our need for love and security and what is afforded to us. We use these lies because they help, actually. But they only help in the short run: Over time, they lead us into a possibly serious misunderstanding of how the world (especially other people) works, and of who, in fact, we are.

For those people who are, perhaps, a bit stronger than those who succumb to neuroses, we still find suffering in the form of alienation: There develops a split between the deeper, "truer" core self within, and the persona (to borrow Jung's term) that we present to the outside world to attempt to meet with those conditions of worth that Rogers talks about. We feel inauthentic, false, phony, dishonest on the one hand, and misunderstood or unappreciated on the other. Over the long haul, this is likely to lead to depression and withdrawal from social life. But sometimes, alienation can lead to new perspectives on life and some remarkably creative insights. Perhaps we owe a good portion of our art, music, and literature to these same people.
At the other end of the spectrum are those people whose psychological suffering is founded on **physiological problems**. Schizophrenia, although it certainly has some sizable social and psychological causes, seems to have a considerable physiological component. Other disorders, such as bipolar, major depression, and obsessive-compulsive disorders, improve with the use of medications that enhance the effects of our own neurotransmitters. The borderline between psychology and physiology is becoming increasingly blurry!

**Coping strategies**

People troubled by neuroses will also find themselves attracted to certain patterns of living that to one degree or another keep the psychological pain at bay: They may become alcoholics, or work-aholics, or sex addicts, or they may become obsessed with cleanliness or physical health, etc. These patterns can involve unusual behaviors, emotional attachments, obsessive thoughts, etc. Binswanger calls these patterns **themes** and they are similar to Horney's **neurotic needs**, Ellis's **irrational beliefs**, and the behaviorists' **maladaptive habits**.

Many theorists see a certain order among these themes, and classify them into four or five categories, which Horney calls **coping strategies**. Fromm calls them **orientations**, Freud uses **character types**... They are, perhaps, the result of an interaction between a person's temperament and the specific stressors they must deal with.

There are two coping strategies we can readily agree on:
The **dependent style** is characterized by a sense of inferiority and weakness, but also involves a strong -- perhaps desperate -- use of manipulation of others. It is also referred to as **oral passive, getting, leaning, compliant, or receptive.**

The **aggressive style** is characterized by aggressive posturing that serves to temporarily diminish a sense of inferiority -- i.e. the superiority complex! When you feel bad about yourself, beat or humiliate someone else. This is also known as **oral aggressive, ruling, dominant, or exploitative.**

From there, things get more uncertain.

A third candidate is the **perfectionist** style. This type of person attempts to actually reach the excessively difficult standards they have accepted for themselves -- or at least pretend to reach them. They tend to be emotionally detached from others, and to dislike depending on them. It is also known as the **anal retentive or hoarding** type.

A fourth candidate is the **schizoid style**, AKA, the **avoiding or withdrawing** type. This kind of person attempts to remove him- or herself from most if not all social interaction. They tend to be somber, psychologically detached, sometimes angry at the whole world, and potentially violent.

And a last, fifth candidate is the **infantile style**, AKA, the **phallic or marketing** style. These people avoid responsibility by essentially extending their childhoods into adulthood. They are obsessed with youth, fun, adventure, and even high risk activities. They tend to be shallow and hedonistic.

One could argue that the most common coping strategy of all -- most common because it works so well -- is **conventionality**, "busy-ness," getting lost in the day-to-day. It will be up to future personality researchers to determine which of these are true styles, if the idea of a few styles holds up, or if we should stick to a more individualistic way of describing people's coping.

**Therapy**

It is somewhat surprising that, for all the variation in theories, there is considerable agreement regarding therapy.
First, there is an emphasis on **self-awareness** or, as Freud put it, making the unconscious conscious. We encourage our clients to understand their biological, social, and personal unconscious and related motivations, to examine the conflicts between their needs and the standards society and they themselves impose, and to look behind their defensive posturings.

We are also taught to encourage our clients to discover more **conscious, higher motivations** -- meaning the development of competence, creativity, and compassion, becoming valuable to oneself and to others....

And the means of therapy? We are taught to use genuinely **caring dialog**, and to provide **support** (not management or control) with a goal of eventual **autonomy** for the client.

Now, each theory has its own set of preferred techniques. Some, such as the radical behaviorist approach, insist that techniques are all you need. Others, such as Rogers’ approach, suggest that you don’t need techniques at all, just an empathic, respectful, and honest personal presence. Probably the majority of therapists, however, follow the middle path and use a few techniques that they have found useful and that fit their clients’ and their own personalities.

In addition, we now have a fairly reliable set of **drugs** that appear to help. Our understanding of the physiological bases for psychological problems has been growing rapidly, and, while that understanding is far from complete, it has allowed us to help people more effectively. Most therapists are still hesitant to rely entirely on medications, perhaps rightly so. But these medications certainly seem to help in emergency situations and for those whose suffering just doesn't respond to our talk therapies.

**Conclusions**

Even among our list of consistencies, we can find some "**metaconsistencies.**" Being a visual sort, I like to put things into graphic form. So here goes:
What you see here is "poor me" (or "poor you"), at the center of enormous forces. At top, we have **history, society, and culture**, which influence us primarily through our learning as mediated by our families, peers, the media, and so on. At the bottom, we have **evolution, genetics, and biology**, which influence us by means of our physiology (including neurotransmitters, hormones, etc.) Some of the specifics most relevant to psychology are instincts, temperaments, and health. As the nice, thick arrows indicate, these two mighty forces influence us strongly and continuously, from conception to death, and sometimes threaten to tear us apart.

There is, of course, nothing simple about these influences. If you will notice the thin arrows (a) and (b). These illustrate some of the more roundabout ways in which biology influences our learning, or society influences our physiology. The arrow labeled (a) might represent an aggressive temperament leading to a violent response to certain media messages that leads to a misunderstanding of those messages. Or (b) might represent being raised with a certain set of nutritional habits that lead to a physiological deficiency in later life. There are endless complexities.

I also put in a number of little arrows, marked (c). These represent **accidental influences**, physiological or experiential. Not everything that happens in our environment is part of some great historical or evolutionary movement! Sometimes,
stuff just happens. You can be in the wrong place at the wrong time, or the right place at the right time: Hear some great speaker that changes the direction of your life away from the traditional path, or have a cell hit by stray radiation in just the wrong way.

Last, but not least, there's (d), which represents our own choices. Even if free will ultimately does not stand up to philosophical or psychological analysis, we can at least talk about the idea of self-determination, i.e. the idea that, beyond society and biology and accident, sometimes my behavior and experience is caused by... me!

Perhaps there is more agreement than I originally thought! This bodes well for our field. Perhaps we can get through the next so many years intact, and arrive, somewhere in the twenty-first century, at full scientific status. I do hope so, although I also hope that Personality continues to be a bit of an art as well. I choose to believe that people will always be a bit harder to predict and control than your average green goo in a test tube!

**HANS EYSENCK (1916 - 1997)**

This chapter is devoted to theories of temperament. Temperament is that aspect of our personalities that is genetically based, inborn, there from birth or even before. That does not mean that a temperament theory says we don't also have aspects of our personality that are learned! They just have a focus on "nature," and leave "nurture" to other theorists!

The issue of personality types, including temperament, is as old as psychology. In fact, it is a good deal older. The ancient Greeks, to take the obvious example, had given it considerable thought, and came up with two dimensions of temperament, leading to four “types,” based on what kind of fluids (called humors) they had too much or too little of. This theory became popular during the middle ages.

The **sanguine** type is cheerful and optimistic, pleasant to be with, comfortable with his or her work. According to the Greeks, the sanguine type has a particularly abundant supply of blood (hence the name sanguine, from sanguis, Latin for blood) and so also is characterized by a healthful look, including rosy cheeks.
The **choleric** type is characterized by a quick, hot temper, often an aggressive nature. The name refers to bile (a chemical that is excreted by the gall bladder to aid in digestion). Physical features of the choleric person include a yellowish complexion and tense muscles.

Next, we have the **phlegmatic** temperament. These people are characterized by their slowness, laziness, and dullness. The name obviously comes from the word phlegm, which is the mucus we bring up from our lungs when we have a cold or lung infection. Physically, these people are thought to be kind of cold, and shaking hands with one is like shaking hands with a fish.

Finally, there’s the **melancholy** temperament. These people tend to be sad, even depressed, and take a pessimistic view of the world. The name has, of course, been adopted as a synonym for sadness, but comes from the Greek words for black bile. Now, since there is no such thing, we don’t quite know what the ancient Greeks were referring to. But the melancholy person was thought to have too much of it!

These four types are actually the corners of two dissecting lines: **temperature** and **humidity**. Sanguine people are warm and wet. Choleric people are warm and dry. Phlegmatic people are cool and wet. Melancholy people are cool and dry. There were even theories suggesting that different climates were related to different types, so that Italians (warm and moist) were sanguine, Arabs (warm and dry) were choleric, Russians (cool and dry) were melancholy, and Englishmen (cool and wet) were phlegmatic!

What might surprise you is that this theory, based on so little, has actually had an influence on several modern theorists. Adler, for example, related these types to his four personalities. But, more to the point, Ivan Pavlov, of classical conditioning fame, used the humors to describe his dogs’ personalities.

One of the things Pavlov tried with his dogs was conflicting conditioning -- ringing a bell that signaled food at the same time as another bell that signaled the end of the meal. Some dogs took it well, and maintain their cheerfulness. Some got angry and barked like crazy. Some just laid down and fell asleep. And some whimpered and
whined and seemed to have a nervous breakdown. I don’t need to tell you which dog is which temperament!

Pavlov believed that he could account for these personality types with two dimensions: On the one hand there is the overall level of arousal (called excitation) that the dogs’ brains had available. On the other, there was the ability the dogs’ brains had of changing their level of arousal -- i.e. the level of inhibition that their brains had available. Lots of arousal, but good inhibition: sanguine. Lots of arousal, but poor inhibition: choleric. Not much arousal, plus good inhibition: phlegmatic. Not much arousal, plus poor inhibition: melancholy. Arousal would be analogous to warmth, inhibition analogous to moisture! This became the inspiration for Hans Eysenck’s theory.

**Theory**

Eysenck’s theory is based primarily on physiology and genetics. Although he is a behaviorist who considers learned habits of great importance, he considers personality differences as growing out of our genetic inheritance. He is, therefore, primarily interested in what is usually called temperament.

Eysenck is also primarily a research psychologist. His methods involve a statistical technique called factor analysis. This technique extracts a number of “dimensions” from large masses of data. For example, if you give long lists of adjectives to a large number of people for them to rate themselves on, you have prime raw material for factor analysis.

Imagine, for example, a test that included words like “shy,” “introverted,” “outgoing,” “wild,” and so on. Obviously, shy people are likely to rate themselves high on the first two words, and low on the second two. Outgoing people are likely to do the reverse. Factor analysis extracts dimensions -- factors -- such as shy-outgoing from the mass of information. The researcher then examines the data and gives the factor a name such as “introversion-extraversion.” There are other techniques that will find the “best fit” of the data to various possible dimension, and others still that will find “higher level” dimensions -- factors that organize the factors, like big headings organize little headings.
**Neuroticism**

Neuroticism is the name Eysenck gave to a dimension that ranges from normal, fairly calm and collected people to one’s that tend to be quite “nervous.” His research showed that these nervous people tended to suffer more frequently from a variety of “nervous disorders” we call neuroses, hence the name of the dimension. But understand that he was not saying that people who score high on the neuroticism scale are necessarily neurotics -- only that they are more susceptible to neurotic problems.

Eysenck was convinced that, since everyone in his data-pool fit somewhere on this dimension of normality-to-neuroticism, this was a true temperament, i.e. that this was a genetically-based, physiologically-supported dimension of personality. He therefore went to the physiological research to find possible explanations.

The most obvious place to look was at the **sympathetic nervous system**. This is a part of the autonomic nervous system that functions separately from the central nervous system and controls much of our emotional responsiveness to emergency situations. For example, when signals from the brain tell it to do so, the sympathetic nervous systems instructs the liver to release sugar for energy, causes the digestive system to slow down, opens up the pupils, raises the hairs on your body (goosebumps), and tells the adrenal glands to release more adrenalin (epinephrine). The adrenalin in turn alters many of the body’s functions and prepares the muscles for action. The traditional way of describing the function of the sympathetic nervous system is to say that it prepares us for “fight or flight.”

Eysenck hypothesized that some people have a more responsive sympathetic nervous system than others. Some people remain very calm during emergencies; some people feel considerable fear or other emotions; and some are terrified by even very minor incidents. He suggested that this latter group had a problem of sympathetic hyperactivity, which made them prime candidates for the various neurotic disorders.

Perhaps the most “archetypal” neurotic symptom is the **panic attack**. Eysenck explained panic attacks as something like the positive feedback you get when you place a microphone too close to a speaker: The small sounds entering the mike get amplified and come out of the speaker, and go into the mike, get amplified again, and
come out of the speaker again, and so on, round and round, until you get the famous squeal that we all loved to produce when we were kids. (Lead guitarists like to do this too to make some of their long, wailing sounds.)

Well, the panic attack follows the same pattern: You are mildly frightened by something -- crossing a bridge, for example. This gets your sympathetic nervous system going. That makes you more nervous, and so more susceptible to stimulation, which gets your system even more in an uproar, which makes you more nervous and more susceptible.... You could say that the neuroticistic person is responding more to his or her own panic than to the original object of fear! As someone who has had panic attacks, I can vouch for Eysenck’s description -- although his explanation remains only a hypothesis.

**Extraversion-introversion**

His second dimension is extraversion-introversion. By this he means something very similar to what Jung meant by the same terms, and something very similar to our common-sense understanding of them: Shy, quiet people “versus” out-going, even loud people. This dimension, too, is found in everyone, but the physiological explanation is a bit more complex.

Eysenck hypothesized that extraversion-introversion is a matter of the balance of “inhibition” and “excitation” in the brain itself. These are ideas that Pavlov came up with to explain some of the differences he found in the reactions of his various dogs to stress. **Excitation** is the brain waking itself up, getting into an alert, learning state. **Inhibition** is the brain calming itself down, either in the usual sense of relaxing and going to sleep, or in the sense of protecting itself in the case of overwhelming stimulation.

Someone who is extraverted, he hypothesized, has good, strong inhibition: When confronted by traumatic stimulation -- such as a car crash -- the extravert’s brain inhibits itself, which means that it becomes “numb,” you might say, to the trauma, and therefore will remember very little of what happened. After the car crash, the extravert might feel as if he had “blanked out” during the event, and may ask others to
fill them in on what happened. Because they don’t feel the full mental impact of the crash, they may be ready to go back to driving the very next day.

The introvert, on the other hand, has poor or weak inhibition: When trauma, such as the car crash, hits them, their brains don’t protect them fast enough, don’t in any way shut down. Instead, they are highly alert and learn well, and so remember everything that happened. They might even report that they saw the whole crash “in slow motion!” They are very unlikely to want to drive anytime soon after the crash, and may even stop driving altogether.

Now, how does this lead to shyness or a love of parties? Well, imagine the extravert and the introvert both getting drunk, taking off their clothes, and dancing buck naked on a restaurant table. The next morning, the extravert will ask you what happened (and where are his clothes). When you tell him, he’ll laugh and start making arrangements to have another party. The introvert, on the other hand, will remember every mortifying moment of his humiliation, and may never come out of his room again. (I’m very introverted, and again I can vouch to a lot of this experientially! Perhaps some of you extraverts can tell me if he describes your experiences well, too - assuming, of course, that you can remember you experiences!)

One of the things that Eysenck discovered was that violent criminals tend to be non-neuroticistic extraverts. This makes common sense, if you think about it: It is hard to imagine somebody who is painfully shy and who remembers their experiences and learns from them holding up a Seven-Eleven! It is even harder to imagine someone given to panic attacks doing so. But please understand that there are many kinds of crime besides the violent kind that introverts and neurotics might engage in!

**Neuroticism and extraversion-introversion**

Another thing Eysenck looked into was the interaction of the two dimensions and what that might mean in regard to various psychological problems. He found, for example, that people with phobias and obsessive-compulsive disorder tended to be quite introverted, whereas people with conversion disorders (e.g. hysterical paralysis) or dissociative disorders (e.g. amnesia) tended to be more extraverted.
Here’s his explanation: Highly neuroticistic people over-respond to fearful stimuli; If they are introverts, they will learn to avoid the situations that cause panic very quickly and very thoroughly, even to the point of becoming panicky at small symbols of those situations -- they will develop phobias. Other introverts will learn (quickly and thoroughly) particular behaviors that hold off their panic -- such as checking things many times over or washing their hands again and again.

Highly neuroticistic extraverts, on the other hand, are good at ignoring and forgetting the things that overwhelm them. They engage in the classic defense mechanisms, such as denial and repression. They can conveniently forget a painful weekend, for example, or even “forget” their ability to feel and use their legs.

**Psychoticism**

Eysenck came to recognize that, although he was using large populations for his research, there were some populations he was not tapping. He began to take his studies into the mental institutions of England. When these masses of data were factor analyzed, a third significant factor began to emerge, which he labeled psychoticism.

Like neuroticism, high psychoticism does not mean you are psychotic or doomed to become so -- only that you exhibit some qualities commonly found among psychotics, and that you may be more susceptible, given certain environments, to becoming psychotic.

As you might imagine, the kinds of qualities found in high psychoticistic people include a certain recklessness, a disregard for common sense or conventions, and a degree of inappropriate emotional expression. It is the dimension that separates those people who end up institutions from the rest of humanity!

**OTHER TEMPERAMENT THEORIES**

**Your body and your personality**
In the 1950’s, William Sheldon (b. 1899) became interested in the variety of human bodies. He built upon earlier work done by Ernst Kretschmer in the 1930’s. Kretschmer believed that there was a relationship between three different physical types and certain psychological disorders. Specifically, he believed that the short, round pyknic type was more prone to cyclothymic or bipolar disorders, and that the tall thin asthenic type (a too a lesser degree the muscular athletic thype) was more prone to schizophrenia. His research, although involving thousands of institutionalized patients, was suspect because he failed to control for age and the schizophrenics were considerably younger than the bipolar patients, and so more likely to be thinner.

Sheldon developed a precise measurement system that summarized body shapes with three numbers. These numbers referred to how closely you matched three “types:”

1. **Ectomorphs**: Slender, often tall, people, with long arms and legs and fine features.

2. **Mesomorphs**: Stockier people, with broad shoulders and good musculature.

3. **Endomorphs**: Chubby people, tending to “pear-shaped.”

Noting that these three “types” have some pretty strong stereotypical personalities associated with them, he decided to test the idea. He came up with another three numbers, this time referring how closely you match three personality “types:”

1. **Cerebrotonics**: Nervous types, relatively shy, often intellectual.

2. **Somatotonics**: Active types, physically fit and energetic.

3. **Viscerotonics**: Sociable types, lovers of food and physical comforts.

He theorized that the connection between the three physical types and the three personality types was embryonic development. In the early stages of our prenatal development, we are composed of three layers or “skins:” the ectoderm or outer layer, which develops into skin and nervous system; the mesoderm or middle layer,
which develops into muscle; and the endoderm or inner layer, which develops into the viscera.

Some embryos show stronger development in one layer or another. He suggested that those who show strong ectoderm development would become ectomorphs, with more skin surface and stronger neural development (including the brain -- hence cerebrotonic!). Those with strong mesoderm development would become mesomorphs, with lots of muscle (or body -- hence somatotonic!). And those with strong endomorph development would become endomorphs, with well developed viscera and a strong attraction to food (hence viscerotonic!) And his measurements backed him up.

Now at several points above, I used “types” with quotes. This is an important point: He sees these two sets of three numbers as dimensions or traits, not as types (“pigeon-holes”) at all. In other words, we are all more-or-less ecto-, meso-, AND endomorphs, as well as more-or-less cerebro-, somato-, AND viscerotonic!

**Thirty-five Factors**

**Raymond Cattell** (b. 1905) is another prolific theorist-researcher like Eysenck who has made extensive use of the factor-analysis method, although a slightly different version. In his early research, he isolated 16 personality factors, which he composed into a test called, of course, the 16PF!

Later research added seven more factors to the list. Even later research added twelve “pathological” factors found using items from the MMPI (Minnesota Multiphasic Personality Inventory).

A “second order” factor analysis on the total of 35 factors revealed eight “deeper” factors, as follows, in order of strength:

**QI. Exvia** (Extraversion)

**QII. Anxiety** (Neuroticism)

**QIII. Corteria** ("cortical alertness," practical and realistic)
QIV. **Independence** (strong loner types)

QV. **Discreetness** (socially shrewd types)

QVI. **Subjectivity** (distant and out-of-it)

QVII. **Intelligence** (IQ!)

QVIII. **Good Upbringing** (stable, docile, the salt of the earth)

**Baby Twins**

Arnold Buss (b. 1924) and Robert Plomin (b. 1948), both working at the University of Colorado at the time, took a different approach: If some aspect of our behavior or personality is supposed to have a genetic, inborn basis, we should find it more clearly in infants than in adults.

So Buss and Plomin decided to study infants. Plus, since identical twins have the same genetic inheritance, we should see them sharing any genetically based aspects of personality. If we compare identical twins with fraternal twins (who are simply brothers or sisters, genetically speaking), we can pick out things that are more likely genetic from things that are more likely due to the learning babies do in their first few months.

Buss and Plomin asked mothers of twin babies to fill out questionnaires about their babies’ behavior and personality. Some babies were identical and others fraternal. Using statistical techniques similar to factor analysis, they separated out which descriptions were more likely genetic from which were more likely learned. They found four dimensions of temperament:

1. **Emotionality-impassiveness**: How emotional and excitable were the babies? Some were given to emotional outbursts of distress, fear, and anger -- others were not. This was their strongest temperament dimension.

2. **Sociability-detachment**: How much did the babies enjoy, or avoid, contact and interaction with people. Some babies are “people people,” others are “loners.”
3. **Activity-lethargy**: How vigorous, how active, how energetic were the babies? Just like adults, some babies are always on the move, fidgety, busy -- and some are not.

4. **Impulsivity-deliberateness**: How quickly did the babies “change gears,” move from one interest to another? Some people quickly act upon their urges, others are more careful and deliberate.

The last one is the weakest of the four, and in the original research showed up only in boys. That doesn’t mean girls can’t be impulsive or deliberate -- only that they seemed to learn their style, while boys seem to come one way or the other straight from the womb. But their later research found the dimension in girls as well, just not quite so strongly. It is interesting that impulse problem such as hyperactivity and attention deficit are more common among boys than girls, as if to show that, while girls can be taught to sit still and pay attention, some boys cannot.

**The Magic Number**

In the last couple of decades, an increasing number of theorists and researchers have come to the conclusion that five is the “magic number” for temperament dimensions. The first version, called *The Big Five*, was introduced in 1963 by Warren Norman. It was a fresh reworking of an Air Force technical report by E. C. Tuppes and R. E. Christal, who in turn had done a re-evaluation of Cattell’s original 16 Personality Factors research.

But it wasn’t until R. R. McCrae and P. T. Costa, Jr., presented their version, called *The Five Factor Theory*, in 1990, that the idea really took hold of the individual differences research community. When they introduced the NEO Personality Inventory, many people felt, and continue to feel, that we’d finally hit the motherload!

Here are the five factors, and some defining adjectives:

1. **Extraversion**
   - adventurous
   - assertive
frank
sociable
talkative

vs. Introversion

quiet
reserved
shy
unsociable

2. Agreeableness
altruistic
gentle
kind
sympathetic
warm

3. Conscientiousness
competent
dutiful
orderly
responsible
thorough

4. Emotional Stability (Norman)
calm
relaxed
stable

vs. Neuroticism (Costa and McCrae)
angry
anxious
depressed

5. Culture (Norman) or Openness to Experience (Costa and McCrae)
cultured
esthetic
imaginative
intellectual
open

The Big Five have also been shown to have a considerable genetic component via twin studies:

For a Big Five "mini-test," click here!

### The PAD Model

Albert Mehrabian has a three-dimensional temperament model that has been well received. It is based on his three-dimensional model of emotions. He theorizes that you can describe just about any emotion with these three dimensions: **pleasure-displeasure** (P), **arousal-nonarousal** (A), and **dominance-submissiveness** (D).

He reasons that, while we all vary from situation to situation and time to time on these three emotional dimensions, some of us are more likely to respond one way or another -- i.e. we have a temperamental disposition to certain emotional responses. He uses the same PAD initials for the temperaments: Trait Pleasure-Displeasure, Trait Arousalability, and Trait Dominance-Submissiveness.
“P” means that, overall, you experience more pleasure than displeasure. It relates positively to extraversion, affiliation, nurturance, empathy, and achievement, and negatively to neuroticism, hostility, and depression.

“A” means that you respond strongly to unusual, complex, or changing situations. It relates to emotionality, neuroticism, sensitivity, introversion, schizophrenia, heart disease, eating disorders, and lots more.

“D” means that you feel in control over your life. It relates positively to extraversion, assertiveness, competitiveness, affiliation, social skills, and nurturance, and negatively to neuroticism, tension, anxiety, introversion, conformity, and depression.

**Parallels**

Although you may feel a bit overwhelmed with all the various theories, personality theorists in fact are more encouraged than discouraged: It is fascinating to us that all these different theorists, often coming from very different directions, still manage to come up with very parallel sets of temperament dimensions!

First, every theorist puts Extraversion-Introversion and Neuroticism/Emotional Stability/Anxiety into their lists. Few personologists have any doubts about these!

Eysenck adds Psychoticism, which some of his followers are re-evaluating as an aggressive, impulsive, sensation-seeking factor. That to some extent matches up with Buss and Plomin’s Impulsivity, and may be the opposite of Big Five’s Agreeableness and Conscientiousness.

Buss and Plomin’s theory fits best with Sheldon’s: Cerebrotonics are Emotional (and not Sociable), Somatotonics are Active (and not Emotional), and Viscerotonics are Sociable (and not Active). In other words, the factors of these two models are “rotated” slightly from each other!

Cattell’s factors, other than Exvia and Anxiety, are a little harder to place. Discreteness looks a little like Agreeableness, and Corteria a bit like the opposite of Agreeableness; Good Upbringing looks like Conscientiousness; Independence,
perhaps with Intelligence, looks a little bit like Culture. Subjectivity, Corteria, and Independence together might be similar to Eysenck’s Psychoticism.

Mehrabian’s PAD factors are a little tougher to line up with the others, which makes sense considering the different theoretical roots. But we can see that Arousability is a lot like Neuroticism / Emotionality and that Dominance is a lot like Extraversion / Sociability. Pleasure seems related to Extraversion plus non-Neuroticism.

We can also look at Jung and the Myers-Briggs test: Extraversion and Introversion are obvious. Feeling (vs. Thinking) sounds a bit like Agreeableness. Judging (vs. Perceiving) sounds like Conscientiousness. And Intuiting (vs. Sensing) sounds a little like Openness/Culture. It helps to recall that Jung saw these types and functions as essentially genetic -- i.e. temperaments!